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PROCEEDINGS
OF THE
Society of Antiquaries of Scotland



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PROCEEDINGS

OF THE

Society of Antiquaries of Scotland

SESSION

MDCCCCXXII.—MDCCCCXXIII.



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P. S. A. S.

VOL. LVII.

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MDCCCCXXIII.



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LAWS
AND
LIST OF FELLOWS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND

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OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY
ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted November 30, 1901.)

1. The purpose of the Society shall be the promotion of ARCHÆOLOGY, especially as connected with the investigation of the ANTIQUITIES AND HISTORY OF SCOTLAND.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; and they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council and balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on the 30th November in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the list of Fellows.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years.

• One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other Office-Bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreement subsisting between the Society and the Government, the Board of Manufactures (now the Board of Trustees) shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, and nine Fellows, elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Every proposal for altering the Laws must be made through the Council ; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

FORMS OF BEQUEST.

Form of Special Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

General Form of Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ sterling [*to be used for the general purposes of the Society*] [*or, to be used for the special purpose or object, of*], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being.

LIST OF THE FELLOWS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

NOVEMBER 30, 1923.

PATRON:
HIS MAJESTY THE KING.

- | | |
|--|--|
| 1879. ABERCHOMBY, The Right Hon. LORD, of Aboukir and Tullibody, LL.D., 62 Palmerston Place,— <i>Vice-President.</i> | 1902.*ANDERSON, Major ROBERT DOUGLAS, c/o The Manager, Lloyd's Bank, Paignton, Devon. |
| 1896.*ADAM, FRANK, c/o The Straits Trading Co. Ltd., Singapore, Straits Settlements. | 1920. ANDERSON, Rev. ROBERT S. G., B.D., Minister of the United Free Church, Isle of Whithorn, Wigtownshire. |
| 1922. ADAM, Sir JAMES, K.C., C.B.E., King's and Lord Treasurer's Remembrancer, Westquarter, Falkirk. | 1887.*ANDERSON-BERRY, DAVID, M.D., LL.D., F.R.S.E., Versailles, 19 Stanhope Road, Highgate, London, N. 6. |
| 1899. AGNEW, Sir ANDREW N., Bart., Lochnew Castle, Stranraer. | 1923. ANDREWS, MICHAEL CORBET, F.R.G.S., F.R.S.G.S., F.R.S.A.I., Orsett, Derryvolgie Avenue, Belfast. |
| 1917. AGNEW, STAIR CARNEGIE, M.A., LL.B., Barrister-at-Law, 109 Sloane Street, London, S.W.1. | 1913. ANGUS, Miss MARY, Immeriach, Blackness Road, Dundee. |
| 1892. AILSA, The Most Hon. The Marquess of, Culzean Castle, Maybole. | 1921. ANGUS, WILLIAM, Curator of the Historical Department, Record Office, H.M. General Register House. |
| 1905. ALEXANDER, R. S., Grant Lodge, 18 Lomond Road, Trinity. | 1910. ANNAN, J. CRAIG, Glenbank, Lenzie. |
| 1909. ALISON, JAMES PEARSON, F.R.I.B.A., 45 Bridge Street, Hawick. | 1900. ANSTRUTHER, Sir RALPH W., Bart., Balcaskie, Pittenweem. |
| 1922. ALLAN, JAMES H., 18 Oakfield Terrace, Hillhead, Glasgow. | 1897. ANSTRUTHER-GRAY, WILLIAM, Lieut.-Col., Royal Horse Guards, Kilmany, Fife. |
| 1921.*ALLAN, JAMES WATSON, M.B., C.M., F.R.F.P.S. (Glas.), 105 Hill Street, Garnethill, Glasgow. | 1921. ARBUCKLE, ALEXANDER G. W., The Elms, Bridge of Earn, Perthshire. |
| 1918. ALLAN, WILLIAM KINLOCH, Erngath, 2 Wester Coates Avenue. | 1918.*ARGYLL, His Grace The Duke of, Inveraray Castle. |
| 1922. ANDERSON, ARTHUR R., 8 Westbourne Terrace, Glasgow, W. | 1914. ARMITAGE, Captain HARRY, late 15th Hussars, The Grange, North Berwick. |
| 1922. ANDERSON, ERIC S., 5 Eildon Street. | 1910. ARMSTRONG, A. LESLIE, M.C., F.S.I., 14 Swaledale Road, Millhouses, Sheffield. |
| 1907. ANDERSON, JAMES LAWSON, 45 Northumberland Street. | 1921. ARNOTT, JAMES ALEXANDER, F.R.I.B.A., 13 Young Street. |
| 1897. ANDERSON, Major JOHN HAMILTON, 2nd East Lancashire Regiment, c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1. | 1901.*ARTHUR, ALEXANDER THOMSON, M.B., C.M., Ingleside, West Cults, by Aberdeen. |

An asterisk (*) denotes Life Members who have compounded for their Annual Contributions.

1910. ASHER, JOHN, 13 Pitcullen Crescent, Perth.
1921. ASHWORTH, REV. ADRIAN CLAUDE, 26 Balligearry Lane, Inverness.
- 1917.*ATHOLL, His Grace The Duke of, K.T., C.B., M.V.O., D.S.O., LL.D., Blair Castle, Blair Atholl.
1915. BAIN, GEORGE, Rosebank, Nairn.
1922. BAIN, REV. JOHN, St Bride's Manse, West Kilbride.
1920. BAIRD, REV. ANDREW, B.D., J.P., Minister of the united parish of Broughton, Kilbucho, and Glenholm, The Manse, Broughton, Peebles-shire.
1891. BAIRD, WILLIAM, J.P., 11 Pitt Street, Portobello.
1913. BAIRD, Major WILLIAM A., Lennoxlove, Haddington.
1922. BAIRD, WILLIAM MACDONALD, F.F.S., 50 George Street.
1923. BALFOUR, Miss ALICE, Whittingehame, Preston-kirk, East Lothian.
1918. BALFOUR, Lieut.-COL. FREDERICK ROBERT STEPHEN, M.A., D.L., Dawyck, Stobo, Tweeddale.
1915. BALLANTINE, JAMES, 71 George Street.
1922. BALLANTYNE, JOHN MURRAY, 11 St Catherine's Road, Giffnock, Glasgow.
1921. BANERJEA, RASHIHARI, M.B., F.I.A. Sc., Santi-Cootir, Bally, Bengal, India.
1890. BANNERMAN, WILLIAM, M.A., M.D., West Park, 30 Polwarth Terrace.
- 1897.*BARNETT, REV. T. RATCLIFFE, 7 Corrennie Gardens.
1922. BARRIE, JOHN ALEXANDER, 15 Abbey Road, Eskbank.
1910. BARRON, REV. DOUGLAS GORDON, O.B.E., V.D., D.D., Ardchoille, Aberfoyle.
1923. BARRON, EVAN MACLEOD, Proprietor and Editor of *The Inverness Courier*, Oaklands, Inverness.
1909. BARTHOLOMEW, JOHN, O.B.E., of Glenorchard, Advocate, 37 Drumsheugh Gardens.
1922. BARTON, DR SAMUEL SAXON, O.B.E., F.R.F.P.S. (Glas.), L.R.C.P. (Edin.), The Beach, St Michael's Hamlet, Liverpool.
- 1891.*BAYNE, THOMAS, 69 West Cumberland Street, Glasgow.
- 1884.*BEATON, Major ANGUS J., C.M.G., V.D., Trouville, Evesham Road, Pittville, Cheltenham.
1908. BELL, WALTER LEONARD, M.D., 123 London Road, Lowestoft, Suffolk.
- 1923.*BEST, JOHN, Warriston House, Edinburgh.
1913. BEVERIDGE, REV. WILLIAM, The Scottish Mission, Vörösmarty-utca 49, Budapest, Hungary.
- 1877.*BILTON, LEWIS, W.S., 5 Abinger Gardens.
1919. BINNIE, R. B. JARDINE, 34 Huntly Gardens, Kelvinside, Glasgow.
1909. BISHOP, ANDREW HENDERSON, Thornton Hall, Lanarkshire.
1922. BISHOP, FREDERICK, Ruthven House, Colinton.
1882. BLACK, WILLIAM GEORGE, C.B.E., LL.D., Ramoyle, Dowanhill Gardens, Glasgow.
1885. BLAIR, WALTER BIGGAR, LL.D., Firbank, Colinton.
1909. BLUNDELL, REV. ODO, O.S.B., St Anne's Priory, Edge Hill, Liverpool.
1885. BOMPAS, CHARLES S. M., 121 Westbourne Terrace, Hyde Park, London, W. 2.
1917. BONAR, JOHN JAMES, Eldinbrae, Lasswade.
1919. BORLAND, JOHN, Auchencairn, Thornhill, Dumfriesshire.
- 1903.*BORTHWICK, HENRY, of Borthwick Castle, Midlothian, 122 Gt. Western Road, Glasgow.
1920. BOYD, JAMES STIRLING, L.R.I.B.A., Sherwood, 47 Eltham Road, Lee Green, London, S.E. 12.
1913. BRODIE, Captain ROBERT HUME, of South Park, Biggar, Altair, Craigendoran, Helensburgh.
1904. BROOK, EDWARD J., Hoddon Castle, Ecclefechan.
1908. BROOK, WILLIAM, 87 George Street.
- 1906.*BROWN, ADAM, Netherby, Galashiels.
1910. BROWN, ADAM THORBURN, Torquhan, Stow.
1902. BROWN, CHARLES, Dundas Lodge, Kerse, Falkirk.
- 1921.*BROWN, DONALD, 80 Grosvenor Street, West Hartlepool.
1887. BROWN, GEORGE, 2 Spottiswoode Street.
1884. BROWN, G. BALDWIN, M.A., Professor of Fine Art, University of Edinburgh,—*Foreign Secretary*.
1910. BROWN, JOHN ARTHUR, Redholm, Kilmaurs, Ayrshire.
1912. BROWN, J. T. T., LL.D., Writer, Ashfield, Cambuslang.
1921. BROWN, THOMAS, Lecturer and Chief Assistant, Department of Architecture and Building, The Royal Technical College, Glasgow, 6 Woodend Place, Shettleston, Glasgow.
1923. BRUCE, ARTHUR NICOL, W.S., 10 Coates Gardens.
1893. BRUCE, JOHN, Inverallan, Helensburgh.
1907. BRUCE, Mrs MARY DALZIEL, Sumburgh, Shetland.
1917. BRUCE, ROBERT H. GILBERT, M.B., C.M., Eastgate House, Friockheim, Forfarshire.
- 1922.*BRUNWIN, GEORGE EUSTACE, Haverings, Rayne, Braintree, Essex.
1908. BRYCE, PETER ROSS, 33 Craignillar Park.

1902. BRYCE, THOMAS H., M.A., M.D., F.R.S., Professor of Anatomy, No. 2 The University, Glasgow,—*Vice-President*.
1922. BRYDEN, ROBERT LOCKHART, B.L., Curator of Glasgow Art Galleries and Museum, Archaeological and Historical Department, 71 Victoria Park Drive South, Partick, Glasgow.
1901. BUCCLEUCH AND QUEENSBERRY, His Grace The Duke of, K.T., Dalkeith House, Midlothian.
1905. BURGESS, FRANCIS, 27 Lechmere Road, Willesden Green, London, N.W.
- 1887.*BURGESS, PETER, Craven Estates Office, Coventry.
1917. BURKE, W. M. (no address).
1882. BURNET, SIR JOHN JAMES, LL.D., A.R.A., R.S.A., Architect, 239 St Vincent Street, Glasgow.
1892. BURNETT, Rev. J. B., B.D., The Manse, Fetteresso, Stonehaven.
1911. BURNETT, Rev. WILLIAM, B.D., Restalrig Manse, 31 Lismore Crescent.
1887. BURNS, Rev. THOMAS, D.D., Croston Lodge, 3a Chalmers Crescent.
- 1901.*BUTE, The Most Hon. The Marquess of, K.T., Mount Stuart, Rothesay.
1923. CADELL, F. C. B., 6 Ainslie Place.
1908. CADELL, HENRY M., B.Sc., F.R.S.E., Grange, Linlithgow.
- 1898.*CADENHEAD, JAMES, R.S.A., R.S.W., 15 Inverleith Terrace.
1921. CALDER, CHARLES S. T., Assistant Architect, Royal Commission on Ancient Monuments (Scot.), 4 Drumsheugh Gardens.
- 1919.*CALLANDER, ALEXANDER D., Nanthupana, Tebuwana, Ceylon.
- 1898.*CALLANDER, JOHN GRAHAM, Ruthvenfield House, Almondbank, Perthshire,—*Director of Museum*.
1908. CAMERON, Rev. ALLAN T., M.A., Chipstable Rectory, Wivelicombe, Somerset.
1910. CAMERON, D. Y., A.R.A., R.S.A., R.S.W., LL.D., Dun Eaglais, Kippen.
1922. CAMERON, Major DONALD C., R.A.S.C., c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1.
1887. CAMERON, J. A., M.D., Firhall, Nairn.
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1906. CAMPBELL, DONALD GRAHAM, M.B., C.M., Auchinellan, Elgin.
1886. CAMPBELL, Sir DUNCAN ALEXANDER DUNDAS, Bart., C.V.O., of Barcaldine and Glenure, 16 Ridgeway Place, Wimbledon, S.W. 19.
1922. CAMPBELL, DUNCAN JOHN FORBES, 10 Cardozo Road, Holloway, London, N. 7.
1917. CAMPBELL, J. H. MAYNE, The Oriental Club, 18 Hanover Square, London, W. 1.
1922. CAMPBELL, JOHN MACLEOD, The Captain of Saddell Castle, Glen Saddell, by Carrodale, Argyll.
1922. CAMPBELL, Sheriff JOHN MACMASTER, Norwood, Campbeltown, Argyll.
1909. CAMPBELL, Mrs M. J. C. BURNLEY, Ormidale, Colintrave.
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1891. CARMICHAEL, JAMES, of Arthursstone, Ardler, Meigle.
- 1888.*CARMICHAEL, The Right Hon. LORD, of Skirling, G.C.S.I., G.C.I.E., K.C.M.G., 13 Portman Street, London, W. 1,—*President*.
1919. CARNEGIE, The Lady HELENA M., Rohallion, Murthly, Perthshire.
1923. CARNEGIE-ARBUTHNOTT, Lieut.-Col., Balmamoon, Brechin.
1922. CARRUTHERS, ARTHUR STANLEY, Naworth House, 28 Foxley Hill Road, Purley, Surrey.
1896. CAW, JAMES L., Director of the National Galleries of Scotland, 14 Cluny Place.
1919. CHALMERS, Rev. HENRY REID, The Manse, Duffus, Elgin.
1903. CHISHOLM, EDWARD A., 42 Great King Street.
1901. CHRISTIE, Miss ELLA R., Cowden Castle, Dollar.
1910. CHRISTISON, JAMES, J.P., Librarian, Public Library, Montrose.
1916. CHRYSAL, FRANCIS MAXWELL, M.B. (no address).
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1889. CLARK, DAVID R., M.A., 8 Park Drive West, Glasgow.
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1921. CLARK, WILLIAM FORDYCE, Hillgarth, 12 Woodhall Terrace, Juniper Green.
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1922. CLOUSTON, RONALD GILLAN, L.R.C.P. (Edin.), L.R.C.S. (Edin.), 32 Barrington Drive, Glasgow.
- 1921.*CLOUSTON, THOMAS HAROLD, O.B.E., Langskaill, 33 St Mary's Road, Wimbledon, Surrey.
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1916. COATES, HENRY, Corander, Perth.
- 1905.*COCHRANE, KENNETH, Newfaan Isle, Galashiels.
1914. COCHRANE, Lt.-Col. The Rt. Hon. Lord, of Cults, Crawford Priory, Springfield, Fife.
- 1901.*COCHRAN-PATRICK, Mrs ELLA A. K., Woodside, Beith.
- 1898.*COCHRAN-PATRICK, NEIL J. KENNEDY, of Woodside, Advocate, Ladyland, Beith.
- 1919.*COCKBURN, Captain ARCHIBALD FREDERICK, R.E. (T.F.), The Abbey, North Berwick.
- 1920.*COLLINGWOOD, R. G., M.A., F.S.A., Pembroke College, Oxford.
1908. COLLINS, Major HUGH BROWN, Craigend, Kilmun, Argyll.
- 1921.*COLVILLE, Captain NORMAN R., M.C., Penheale Manor, Fgloskerry, Cornwall.
1909. COMBIE, JOHN D., M.A., B.Sc., M.D., F.R.C.P.E., Lecturer on the History of Medicine, University of Edinburgh, 25 Manor Place.
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1920. CORNELIUS, Rev. WILLIAM J. J., D.Litt., M.A., B.D., A.K.C., F.R.Hist.S., C.F., etc., All Saints' Vicarage, Sumner Road, North Peckham, London, S.E.15.
1911. CORRIE, JOHN, Burnbank, Moniaive, Dumfriesshire.
1913. CORRIE, JOHN M., Post Office, Dalry, Ayrshire.
- 1920.*COSAR, KENNETH CHARLES, of Rosely, Rosely, Arbroath.
1918. COUPER, Rev. W. J., M.A., 26 Circus Drive, Dennistoun, Glasgow.
1891. COUTTS, Rev. ALFRED, Ph.D., B.D., 5 Queensferry Terrace.
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- 1920.*COWAN, ROBERT CRAIG, Eskhill, Inveresk, Midlothian.
1888. COWAN, WILLIAM, 47 Braid Avenue.
- 1893.*COX, ALFRED W., Glendoick, Glencarse, Perthshire.
- 1901.*COX, DOUGLAS H. (no address).
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- 1911.*CRAW, JAMES HEWAT, West Foulden, Berwick-on-Tweed.
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- 1901.*CRAWFORD, The Right Hon. The Earl of, K.T., Balcarras, Colinsburgh, Fife.
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1907. CUMMING, ALEXANDER D., Headmaster, Public School, Callander.
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- 1889.*CURL, JAMES, F.S.A., Priorwood, Melrose, — *Curator of Museum*.
- 1886.*CURRIE, JAMES, Larkfield, Wardie Road.
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- 1879.*CURSIER, JAMES WALLS, 3 Denham Green Avenue.
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- 1886.*DAVIDSON, JAMES, Solicitor, Kirriemuir.
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- 1923.*DICKSON, ARTHUR HOPE DRUMMOND, 5 Lennox Street.
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1895. DICKSON, WILLIAM K., LL.D., Advocate, 8 Gloucester Place,—*Librarian*.
- 1882.*DICKSON, WILLIAM THAQUAIR, W.S., 11 Hill Street.
1919. DINWOODIE, JOHN, Union Bank House, Crieff.
- 1886.*DIXON, JOHN HENRY, Clach na Paire, Pitlochry.
1910. DIXON, RONALD AUDLEY MARTINEAU, F.R.S.E., F.G.S., F.R.G.S., The Manor House, Patrington, East Yorkshire.
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- 1911.*DOUGLAS, JOHN, 6 St Mary's Grove, Barnes Common, London, S.W. 13.
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- 1912.*DRUMMOND, HUGH W., of Hawthornden, Lasswade, The Chase, Churt, Farnham, Surrey.
- 1900.*DRUMMOND, JAMES W., Westerlands, Stirling.
- 1896.*DRUMMOND, ROBERT, C.E., Fairfield, Paisley.
- 1895.*DRUMMOND-MORAY, Capt. W. H., of Abercainy, Crieff.
1902. DUFF-DUNBAR, Mrs L., of Ackergill, Ackergill Tower, Wick, Caithness.
1920. DUNCAN, ALEXANDER MACLAUCHLAN, A.R.I.B.A., c/o Engineer-in-Chief, Chinese Maritime Customs, Shanghai, China.
1909. DUNCAN, Rev. DAVID, North Esk Manse, Musselburgh.
1917. DUNCAN, DAVID, J.P., Parkview, Balgay Road, Dundee.
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1921. DUNDAS, R. H., M.A., Senior Censor, Christ Church, Oxford.
1923. DUNLOP, Miss, of Shieldhill, Biggar.
1923. DUNLOP, Rev. WILLIAM, M.A., St David's Manse, Buckhaven, Fife.
1922. DWELLY, EDWARD, Wellington Avenue, Fleet, Hants.
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1913. EDGAR, Rev. WILLIAM, B.A., B.D., 14 St Andrew's Drive, Pollokshields, Glasgow.
1923. EDINGTON, ARCHIBALD MAXWELL, of the *Montreal Daily Star*, Montreal, Canada.
1909. EDINGTON, GEORGE HENRY, M.D., 20 Woodside Place, Glasgow.
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- 1892.*EDWARDS, JOHN, LL.D., F.R.S.E., 4 Great Western Terrace, Glasgow.
1904. EELLES, FRANCIS CAROLUS, F.R.Hist.S., 43 Grosvenor Road, London, S.W. 1.
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- 1885.*ELDER, WILLIAM NICOL, M.D., 6 Torphichen Street.
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- 1923.*ELPHINSTONE, The Right Hon. LORD, Carberry Tower, Musselburgh.
1920. EVANS, CHARLES, Collingwood, 69 Edward Road, Balsall Heath, Birmingham.
1909. EWEN-WATSON, GEORGE J., W.S., Estate Office, Fort-William.
1923. FAIRLIE, REGINALD F., A.R.S.A., Architect, 7 Ainslie Place.
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1919. FALCONER, JOHN IRELAND, M.A., LL.B., W.S., Lyndwilg, Juniper Green, Midlothian.
1921. FARMER, HENRY GEORGE, 102 Byres Road, Hillhead, Glasgow.
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1922. FAVELL, RICHARD VERNON, M.R.C.S., L.R.C.P., Penberth, St Buryan, S.O., Cornwall.
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1892. FERGUSON, JOHN, Writer, Duns.
1921. FERGUSON, Rev. JAMES, The Manse, Constonphine.

1875. FERBOUSSON, Sir JAMES R., Bart., of Spitalhaugh, West Linton.
- 1899.*FINDLAY, JAMES LESLIE, Architect, 10 Eton Terrace.
- 1892.*FINDLAY, Sir JOHN R., K.B.E., LL.D., 3 Rothesay Terrace.
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1884. FLEMING, D. HAY, LL.D., 4 Chamberlain Road.
1909. FLEMING, Rev. D. W. B., Culross Park, Culross.
- 1922.*FLEMING, JOHN ARNOLD, Locksley, Helensburgh.
1917. FORGAN, ANDREW, 292 Hingston Avenue, Notre Dame de Grâce, Montreal, Canada.
1917. FORSYTH, HUGH ALEXANDER, J.P., Murroes Schoolhouse, near Dundee.
- 1911.*FORSYTH, WILLIAM, F.R.C.S. Ed., Inver oak, Gerrard's Cross, Bucks.
1923. FORTEVIOU, The Right Hon. LORD, of Dupplin, Dupplin Castle, Perth.
- 1905.*FOULKES-ROBERTS, ARTHUR, Solicitor, Bron-y-parc, Denbigh, N. Wales.
1923. FRANKLIN, CHARLES A. H., M.R.C.S. (Eng.), L.R.C.P. (Lon.), "Kwato," 23 Liskeard Gardens, Blackheath, London, S.E. 3.
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1918. FRASER, HUGH ALEXANDER, M.A., Glen Urquhart Higher Grade School, Drumnadrochit, Inverness-shire.
1922. FRASER, Captain The Rev. JOSEPH B., F.R.S.E., United Free Church Manse, Kinneff, Bervie.
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1922. FYFE, WILLIAM, F.S.Sc., 103 Clive Road, Portsmouth.
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1912. GALLOWAY, Mrs LINDSAY, Kilchrist, Campbelltown.
- 1920.*GALLOWAY, THOMAS L., Advocate, Auchendrane, by Ayr.
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1915. GARDNER, JAMES, Solicitor, Clunie, Paisley.
1923. GARDNER, JOHN, Woodend, Houston.
1921. GARDNER, WILLOUGHBY, F.S.A., Deganwy, North Wales.
1916. GARLE, Mrs MARY GLADYS LLOYD (no address).
1923. GARRETT, MATTHEW LAURIE, 1 Wester Coates Gardens.
- 1916.*GARSON, JAMES, W.S., 4 Chester Street.
1919. GASS, JOHN, M.A., Orlig, Carlisle, Lanarkshire.
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- 1903.*GIBSON, WILLIAM, M.A., 44 Piazza Farnese, Rome.
1922. GILLESPIE, JOHN, F.R.S.A., 56 Kenmore Street, Pollokshields, Glasgow.
1896. GILLIES, PATRICK HUNTER, M.D., 2 Hartington Gardens.
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- 1912.*GLADSTONE, HUGH S., M.A., F.R.S.E., Capenoch, Thornhill, Dumfriesshire.
1901. GLADSTONE, Sir JOHN R., Bart., Fasque, Laurencekirk.
1904. GLENARTHUR, The Right Hon. LORD, of Carlung, LL.D., Carlung, Fullarton, Troon.
1921. GORDON, Rev. JAMES BRYCE, The Manse, Oldhamstocks, Cockburnspath.
1909. GORDON, JAMES TENNANT, O.B.E., Chief Constable of Fife and Kinross, Bellbrae, Cupar, Fife.
1883. GORDON-GILMOUR, Brigadier-General ROBERT GORDON, C.B., C.V.O., D.S.O., of Craigmillar, The Inch, Liberton.
1911. GORULAY, CHARLES, B.Sc., F.R.I.B.A., I.A., Professor of Architecture in the Royal Technical College, Glasgow, Coniston, Craigdhu Road, Milngavie.
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1920. GRAHAM, JAMES MAXTONE, C.A., 4 Eton Terrace.
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1888. GRANT, F. J., W.S., Lyon Office, H.M. General Register House.

1915. GRAY, WILLIAM FORBES, F.R.S.E., 8 Mansion-house Road.
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- 1871.*GRUB, The Very Rev. Provost GEORGE, 18 Learmonth Terrace.
1909. GRUNDY-NEWMAN, S. A., F.R. Hist. Soc., Little-ton Place, Walsall.
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- 1907.*GUTHRIE, CHARLES, W.S., 1 N. Charlotte Street.
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1910. HALLIDAY, W., F.S.L.A., M.A., D.Sc., F.S. Litt., The Bungalow, Higham-on-Hill, Nuneaton.
- 1922.*HAMILTON, JOHN, Punta Loyola, Patagonia, South America.
- 1901.*HAMILTON OF DALZELL, The Right Hon. LORD, K.T., C.V.O., Dalzell, Motherwell.
1898. HAMPTON, Rev. DAVID MACHARDY, The Manse, Culross.
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- 1865.*HAY, ROBERT J. A., c/o Messrs Dundas & Wilson, 16 St Andrew Square.
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1902. HENDERSON, ADAM, University Library, Glasgow.
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- 1889.*HENDERSON, JAMES STEWART, 1 Pond Street, Hampstead, London, N.W.3.
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- 1900.*HOLMS, JOHN A., Formakin, Bishopton, Renfrew-shire.
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1922. HUNTER, WILLIAM WIGHT, Belmont, Strichen Road, Fraserburgh.
1921. HUTCHESON, Miss EUPHEMIA G., Herschel House, Broughty Ferry.
1909. HYDE, The Hon. JOHN, F.R.G.S., etc., 2947 Tilden Street, N.W., Washington, D.C., U.S.A.
1912. HYSLOP, ROBERT, F.R.Hist.S., 5 Belle Vue Crescent, Sunderland.
1923. INCHES, EDWARD J., D.L., 88 Princes Street.
1908. INGLIS, ALAN, Art Master, Arbroath High School, 4 Osborne Terrace, Millgate Loan, Arbroath.
1891. INGLIS, ALEXANDER WOOD, 4 Rosebery Crescent.
1904. INGLIS, FRANCIS CAIRD, Rock House, Calton Hill.
- 1911.*INGLIS, HARRY R. G., 10 Dick Place.
- 1906.*INGLIS, JOHN A., Advocate, 13 Randolph Crescent.
1920. INNES, THOMAS, of Learney, 2 Inverleith Row.
1921. IRVING, JOHN, Malmo, Cardross, Dumbartonshire.
1913. JACKSON, GEORGE ERSKINE, O.B.E., M.C., W.S., Kirkbuddo, Forfar.
1923. JACKSON, STEWART DOUGLAS, 73 West George Street, Glasgow.
1919. JACOB, Mrs VIOLET, c/o Ladies' Empire Club, 69 Grosvenor Street, London, W.1.
1918. JAMIESON, JAMES H., 12 Sciennes Gardens.
1923. JAMIESON, JOHN BOYD, M.D., F.R.C.S.E., 43 George Square.
1922. JERU, THOMAS JOHN, M.A., M.D., Professor of Geology, University of Edinburgh, 35 Great King Street.
1916. JOHNSON, JOHN BOLAM, C.A., 12 Granby Road, — Treasurer.
- 1902.*JOHNSTON, ALFRED WINTLE, Architect, 29 Ashburnham Mansions, Chelsea, London, S.W. 10.
1919. JOHNSTON, JAMES, M.L.A., Librarian, "Raffles" Library, Singapore, Straits Settlements.
1907. JOHNSTON, WILLIAM CAMPBELL, W.S., 19 Walker Street.
1892. JOHNSTONE, HENRY, M.A. (Oxon.), 69 Northumberland Street.
1920. JOHNSTONE, JAMES F. K., 67 Forest Avenue, Aberdeen.
1898. JONAS, ALFRED CHARLES, Locksley, Tennyson Road, Bognor, Sussex.
1922. JOPP, PETER, Cabrach, Huntly, Banffshire.
1922. JOUBERT, FÉLIX, Architect, Dyke Lodge, Dyke Road Avenue, Patcham, near Brighton, Sussex.
1917. KATER, ROBERT M'CULLOCH, Coniston, Glasgow Road, Kilmarnock.
1910. KAY, ARTHUR, J.P., F.S.A., 11 Regent Terrace.
1893. KAYE, WALTER JENKINSON, M.A., F.S.A., Pembroke, Park View, Harrogate.
- 1922.*KEILLER, ALEXANDER, of Morven, Ballater, Aberdeenshire.
1912. KELLY, JOHN KELSO, 105 Morningside Drive.
- 1870.*KELTIE, Sir JOHN S., LL.D., F.R.G.S., F.S.S., 88 Brondesbury Road, London, N.W. 6.
1915. KELWAY, CLIFTON, F.R.Hist.S., 25 Redcliffe Square, London, S.W. 10.
1911. KENNEDY, ALEXANDER, Kenmill House, Hamilton Drive, Bothwell.
1911. KENNEDY, ALEXANDER BURGESS, 6 Mansfield Place.
1907. KENT, BENJAMIN WILLIAM JOHN, Tatefield Hall, Beckwithshaw, Harrogate.
1907. KENT, BRAMLEY BENJAMIN, Tatefield Hall, Beckwithshaw, Harrogate.
1910. KER, CHARLES, M.A., C.A., Easterton, Milngavie, Stirlingshire.
1912. KER, JAMES INGLIS, 6 Belgrave Place.
- 1889.*KERMODE, PHILIP M. C., Advocate, The Manx Museum, Douglas, Isle of Man.
1889. KERR, ANDREW WILLIAM, F.R.S.E., 81 Great King Street.
1896. KERR, HENRY F., A.R.I.B.A., 12 East Claremont Street.
1920. KERR, WALTER HUME, M.A., B.Sc., F.R.S.E., Lecturer on Structural Engineering, The University, Edinburgh.
- 1911.*KETCHEN, W. T., W.S., Keeper of the General Register of Sasines, H.M. General Register House.
1911. KEYSER, CHARLES E., M.A., F.S.A., J.P., D.L., Aldermaston Court, Reading.
1912. KING, CHARLES, F.S.Sc. Lond., 21 Newton Place, Glasgow.
- 1912.*KING, Sir JOHN WESTALL, Bart., 41 West George Street, Glasgow.

1921. KINGHORN, ROBERT, Whitsome West Newton, Chirnside, Berwickshire.
- 1900.*KINTORE, The Right Hon. The Earl of, K.T., G.C.M.G., LL.D., Keith Hall, Inverurie.
1919. KIRKNESS, WILLIAM, Fernlea, Kirkwall, Orkney.
1896. KIRKPATRICK, JOHN G., W.S., 2 Belford Park.
1915. KIRKWOOD, CHARLES, Duncairn, Helensburgh.
1922. KLEIN, WALTER G., F.S.A., 7 Eldon Road, London, N.W. 3.
1922. KNEEN, Miss FLORENCE BEATRICE, Ballacrye, Ballaugh, Isle of Man.
1900. KNOWLES, Captain WILLIAM HENRY, F.S.A., Well Close, Lansdown Parade, Cheltenham.
1922. LACAILLE, ARMAND D., 2 Minard Terrace, Partickhill, Glasgow.
- 1910.*LAIDLER, PERCY WARD, L.D.S., R.C.S. Edin., Garies, C.P., South Africa.
1920. LAMB, ERNEST H., M.A. (Hons.) Edin., Rector of Lanark Grammar School, The Rectory, Lanark.
1923. LAMB, Rev. GEORGE, B.D., Beechwood, Melrose.
1923. LAMOND, ROBERT, M.A., LL.B., 8 Marchmont Terrace, Kelvinside, Glasgow.
- 1901.*LAMONT, Sir NORMAN, Bart., M.P., of Knockdow, Toward, Argyllshire.
1893. LANGWILL, ROBERT B., 7 St Leonard's Bank, Perth.
1919. LAWSON, Lieut.-Col. H. SLEEMAN, R.A.S.C., c/o Messrs Cox & Co., 16 Charing Cross, London, S.W. 1.
- 1882.*LEADBETTER, THOMAS GREENSHIELDS, of Spital Tower, Denholm, Roxburghshire.
1919. LEASK, JOHN, North of Scotland Bank Buildings, Forres.
- 1910.*LEIGH, Captain JAMES HAMILTON, Bindon, Wellington, Somerset.
1907. LEIGHTON, JOSEPH MACKENZIE, Librarian, Public Library, Greenock.
1907. LENNOX, DAVID, M.D., F.R.A.S., Ruddon Grange, Elie, Fife.
- 1902.*LEVESON-GOWER, F. S., Travellers' Club, Pall Mall, London.
1907. LIND, GEORGE JAMES, 121 Rua do Golgotha, Oporto, Portugal.
- 1919.*LINDSAY, Mrs BROUN, of Colstoun and Muirkirk, Colstoun, Haddington.
1900. LINDSAY, Rev. JOHN, M.A., D.D., LL.D., "Bohemia," Glyndyfrdwy, Llangollen, N. Wales.
1890. LINDSAY, LEONARD C. C., Broomhills, Honiton, Devon.
1920. LINLITHGOW, The Most Hon. The Marquess of, Hopetoun House, South Queensferry.
1921. LINTON, ANDREW, B.Sc., Gilmanacleuch, Selkirk.
- 1881.*LITTLE, ROBERT, R.W.S., Hilton Hall, St. Ives, Huntingdonshire.
1915. LOCKHART, JOHN Y., 12 Victoria Gardens, Kirkcaldy.
- 1901.*LOXEY, JOHN W. M., 6 Carlton Street.
1917. LOVE, WILLIAM HENDERSON, M.A., A.Mus., Rowanbank, Craigendoran, Helensburgh.
1905. LUSK, Rev. DAVID COLVILLE, 2 South Parks Road, Oxford.
1921. LYLE, ROBERT, Strathculm, Helensburgh.
1910. LYONS, ANDREW W., 12 Melville Place.
1892. MACADAM, JOSEPH H., Aldborough Hall, Aldborough Hatch, near Ilford, Essex.
1908. M'CONACHIE, Rev. WILLIAM, D.D., The Manse, Lauder.
1915. M'CORMICK, ANDREW, 66 Victoria Street, Newton-Stewart.
1913. M'CORMICK, Sir WILLIAM S., LL.D., 43 Frognaal, London, N.W. 3.
1919. MACDONALD, ALLAN REGINALD, of Waternish and Ardmure, Fasach House, Waternish, Skye.
1904. MACDONALD, CHARLES, Dunglass Castle, Bowling.
1885. MACDONALD, COLL REGINALD, M.D., 17 Wellington Square, Ayr.
- 1900.*MACDONALD, GEORGE, C.B., F.B.A., M.A., LL.D., D.Litt., 17 Leatmonth Gardens,—Curator of Coins.
- 1890.*MACDONALD, JOHN MATHERSON, Moor Hill, Farnham, Surrey.
1922. MACDONALD, ROBERT, J. P., 24 Burnbank Terrace, Glasgow.
- 1872.*M'DOWALL, THOMAS W., M.D., Burwood, Wadhurst, Sussex.
1908. M'ELNEY, Rev. ROBERT, M.A., The Manse, Downpatrick, County Down.
1911. M'EWEN, HUGH DRUMMOND, Lyndhurst, Primrose Bank Road, Trinity.
1917. M'EWEN, ROBERT FINNIE, B.A. Cantab., Advocate, of Marchmont and Bardrochat, Marchmont, Berwickshire.
1903. M'EWEN, W. C., M.A., W.S., 9 South Charlotte Street.
1917. MACFARLANE-GRIEVE, R. W., Penchrise Peel, Hawick.
- 1898.*MACGILLIVRAY, ANGUS, C.M., M.D., D.Sc., 23 South Tay Street, Dundee.

1901. *MACGREGOR, ALASDAIR R., of Macgregor, Cardney, Dunkeld.
1918. MACGREGOR, Rev. WILLIAM CUNNINGHAM, Manse of Covington, Thankerton.
1913. MACKINTOSH, H. B., M.B.E., Redhythe, Elgin.
1922. MACKINTOSH, Rev. R. SMITH, Hon. C.F., The Manse, Girvan, Ayrshire.
1893. MACKINTOSH, WILLIAM FYFE, Procurator-Fiscal of Forfarshire, Linroech, 3 Craigie Terrace, Dundee.
1897. *MACINTYRE, P. M., Advocate, Auchengower, Brackland Road, Callander.
1919. MACK, JAMES LOGAN, S.S.C., 8 Grange Terrace.
1906. MACKAY, GEORGE, M.D., F.P.R.C.S.E., 26 Drumsheugh Gardens.
1903. MACKAY, GEORGE G., Melness, Hoylake, Cheshire.
1888. MACKAY, J. F., W.S., White House, Cramond Bridge, Midlothian.
1912. MACKAY, NORMAN DOUGLAS, M.D., B.Sc., D.P.H., Dall-Avon, Aberfeldy.
1882. MACKAY, WILLIAM, LL.D., Solicitor, Inverness.
1909. MACKEAN, Major NORMAN M., Parkgate, Paisley.
1918. M'KECHNIE, Sir JAMES, K.B.E., The Abbey House, Furness Abbey.
1909. MACKECHNIE, JOHN MACLELLAN, of Balfuning-Douglas, 6 Westbourne Gardens, Glasgow, W.
1923. MACKECHNIE, ROBERT G. S., Artist, 6 Westbourne Gardens, Glasgow, W.
1911. MACKENZIE, ALEXANDER J., Solicitor, 62 Academy Street, Inverness.
1922. MACKENZIE, ALEXANDER MARSHALL, LL.D., R.S.A., F.R.I.B.A., 173A Union Street, Aberdeen.
1887. MACKENZIE, DAVID J., Honorary Sheriff-Substitute for Inverness, Elgin, and Nairn, Deansford, Bishopmill, Elgin.
1918. MACKENZIE, DONALD A., 19 Merchiston Crescent.
1919. MACKENZIE, HECTOR HUGH, J.P., Balclone, Lochmaddy, North Uist.
1891. *MACKENZIE, JAMES, J.P., 2 Rillbank Crescent.
1911. MACKENZIE, JOHN, Dunvegan House, Dunvegan, Skye.
1910. MACKENZIE, MURDO TOLME, M.B., Scolpaig, Lochmaddy.
1882. MACKENZIE, R. W. R., Earishall, Leuchars, Fife.
1904. MACKENZIE, WILLIAM COOK, 94 Church Road, Richmond-on-Thames.
1904. MACKENZIE, W. M., M.A., Secretary, Royal Commission on Ancient and Historical Monuments of Scotland, 4 Drumsheugh Gardens.
1920. M'KERCHAR, JAMES, M.B.E., M.A., Headquarters, Highland Area, 8 Kinnoull Street, Perth.
1921. MACKIE, DAVID CABLE, 16 Queens Gardens, St Andrews.
1911. *MACKIE, Sir PETER JEFFREY, Bart., of Glenreadell and Corraith, Symington, Ayrshire.
1915. MACKINDY, Captain ELLIOT M. S., M.A. (Oxon.), Abbey House, Malmesbury, Wiltshire.
1919. *MACLAGAN, DOUGLAS PHILIP, W.S., 28 Heriot Row.
1923. *MACLAGAN, Miss MORAG, 28 Heriot Row.
1922. M'LAREN, THOMAS, Burgh Engineer, Redcliffe, Barnhill, Perth.
1917. M'LEAN, JAMES, School House, Drumchapel, Glasgow.
1885. *MACLEHOSE, JAMES, M.A., LL.D., F.S.A., The Old Parsonage, Lamington, Lanarkshire.
1923. MACLEOD, DUNCAN, of Skeabost, by Portree, Skye.
1910. MACLEOD, FREDERICK THOMAS, 55 Grange Road.
1921. MACLEOD, JAMES RHYS STUART, B.A. (Cantab.), The Lawn, Cheltenham.
1922. MACLEOD, Rev. MALCOLM, M.A., United Free Church Manse, Lochgilphead, Argyll.
1923. M'LEOD, Rev. MURDO KENNEDY, M.A., 10 Overdale Villas, Langside, Glasgow.
1921. MACLEOD, NEIL MACKENZIE, 24 Barrington Drive, Glasgow.
1890. *MACLEOD, Sir REGINALD, K.C.B., Vinters, Maidstone, Kent.
1909. MACLEOD, Major ROBERT CRAWFORD, 19 Scotland Street.
1921. MACLEOD, WILLIAM COLIN, 30 Stafford Street.
1907. *MACLEOD, Rev. WILLIAM H., B.A. (Cantab.), Fiabary, Shandon, Dumbartonshire.
1919. MACLEOD, Rev. CAMPBELL M., B.D., Minister of Victoria Park United Free Church, Partick, 13 Westbourne Gardens, Glasgow, W.
1905. MACMILLAN, H. P., K.C., 32 Moray Place.
1916. M'MILLAN, Rev. WILLIAM, Chaplain to the Forces, St Leonard's Manse, Dunfermline.
1915. MACNEIL, ROBERT LISTER, of Barra, 78 West 55th Street, New York.
1918. MACPHAIL, GEORGE, F.Z.S., Hearneshrooke, Ballinasloe, Co. Galway, Ireland.
1909. MACPHAIL, J. R. N., K.C., Sheriff of Stirling, Dumbarton, and Clackmannan, 17 Royal Circus.

1918. MACPHERSON, DONALD, 3 St John's Road, Pollokshields, Glasgow.
1921. M'PHERSON, JAMES, 10 Queens Gardens, St Andrews.
- 1900.*MACRAE, Major COLIN, C.B.E., of Feoirliinn, Colintrave, Argyll.
1914. MACRAE-GILSTRAP, Lieutenant-Colonel JOHN, of Eilean Donan, Ballimore, Otter Ferry, Argyll.
- 1882.*MACRITCHIE, DAVID, C.A., 4 Archibald Place.
1921. M'ROBBIE, WILLIAM ALEXANDER, F.S.I., 102 Desswood Place, Aberdeen.
1900. MALCOLM, JOHN, 14 Durham Street, Monifieth, Forfarshire.
1896. MALLOCH, JAMES, M.A., West Croft, Cramond Bridge, Midlothian.
1914. MALLOCH, JAMES J., M.A., Wakefield, Juniper Green.
1919. MALLOCH, WILLIAM STRACHAN, 41 Charlotte Square.
1901. MANN, LUDOVIC M'LELLAN, 144 St Vincent Street, Glasgow.
1921. MARR, HAMILTON CLELLAND, M.D., H.M. Commissioner of Control, Lieut.-Col., R.A.M.C., 10 Succoth Avenue, Murrayfield.
1923. MARSHALL, CHARLES HAY, S.S.C., Dunholm, Dundee.
1906. MARSHALL, HENRY B., Rachan, Broughton, Peeblesshire.
1917. MARSHALL, JOHN NAIRN, M.D., 7 Battery Place, Rothesay.
1885. MARSHALL, WILLIAM HUNTER, Callander, Perthshire.
1922. MARTIN, GEORGE MACGREGOR, 5 West Park Gardens, Dundee.
1915. MARTIN, JAMES H., Hollybank, Panmure Terrace, Dundee.
1909. MARTIN, Rev. JOHN, 9 Corennie Gardens.
1916. MARTIN, Sir WILLIAM, J.P., 24 Athole Gardens, Kelvinside, Glasgow.
1921. MARWICK, HUGH, M.A., 10 King Street, Kirkwall, Orkney.
1917. MARWICK, THOMAS PURVES, A.R.L.B.A., F.S.I., F.L.Arb., 43 Lauder Road.
1922. MASON, JOHN BRUCE, 6 High Street, Selkirk.
1908. MASTIN, JOHN, M.A., D.Sc., Ph.D., Litt.D., LL.D., etc., Principal of Kenyon Hall College, Kenyon, near Manchester.
1884. MAXWELL, The Right Hon. Sir HERBERT EUSTACE, Bart., D.C.L., LL.D., F.R.S., of Monreith, Wigtownshire.
- 1892.*MAXWELL, Sir JOHN STIRLING, Bart., LL.D., H.R.S.A., Pollok House, Pollokshaws.
1904. MAY, THOMAS, M.A., F.E.I.S., F.S.A., Glenearn, Perth Road, Crieff.
1920. MELDRUM, Rev. NEIL, Minister of Forteviot, Perthshire.
1923. MENZIES, ALAN L., W.S., Larchgrove, Balerno.
1900. MENZIES, W. D. GRAHAM, of Pitcur, Hallyburton House, Coupar-Angus.
1878. MERCER, Major WILLIAM LINDSAY, Huntingtower, Perth.
1882. MILLAR, ALEXANDER H., LL.D., Albert Institute, Dundee.
1896. MILLER, ALEXANDER C., M.D., Craig Linnhe, Fort-William.
- 1878.*MILLER, GEORGE ANDERSON, W.S., Knowehead, Perth.
- 1907.*MILLER, ROBERT SCHAW, W.S., 11 Douglas Crescent.
1911. MILLER, STEUART NAPIER, Lecturer in Roman History, The University, Glasgow.
1920. MILNE, Rev. A. A., Oakfield, Doune, Perthshire.
1923. MILNE, GEORGE, Craigellie House, Lonmay, Aberdeenshire.
1884. MITCHELL, HUGH, Solicitor, Pitlochry.
1922. MITCHELL, Lieut.-Colonel J. M., O.B.E., M.C., M.A., Secretary, Carnegie United Kingdom Trust, Viewfield, Dunfermline.
1923. MITCHELL, STEPHEN, of Gilkersonleugh, Abington, Lanarkshire.
- 1890.*MITCHELL, SYDNEY, Architect, The Pleasance, Gullane.
1920. MOFFAT, MUIRHEAD, Morven, 11 Dungoyne Street, Maryhill Park, Glasgow.
1922. MONEY, JAMES, Architect, 3 Princes Square, Strathbungo, Glasgow.
1908. MONTGOMERIE, JOHN CUNNINGHAM, Dalmore, Stair, Ayrshire.
1922. MOONEY, JOHN, J.P., Cromwell Cottage, Kirkwall, Orkney.
1921. MOORE, WILLIAM JAMES, L.R.C.S.E., L.R.C.P.E., L.R.F.P.S.G., F.R.F.P.S.G., 17 Lynedoch Crescent, Glasgow.
1895. MORAY, The Right Hon. The Earl of, H.R.S.A., Kinfauns Castle, Perth.
1922. MORRIS, Professor H. CARLTON S., M.A. (Oxon.), University of Trinity College, Toronto, Canada.
1882. MORRIS, JAMES ARCHIBALD, A.R.S.A., Architect, Wellington Chambers, Ayr.
1882. MORRISON, HEW, LL.D., 12 Blackford Road.
1922. MOSTYN-JONES, Rev. JOHN EDWARD, B.D., 41 Claverley Grove, Finchley, London, N. 3.
- 1887.*MOUBRAY, JOHN J., Naemoor, Rumbling Bridge.

1904. MOUNSEY, J. L., LL.D., W.S., Emeritus Professor of Conveyancing, University of Edinburgh, 24 Glencairn Crescent.
1897. MOXON, CHARLES, 77 George Street.
1889. MUIRHEAD, GEORGE, F.R.S.E., Commissioner for the Duke of Richmond and Gordon, Speybank, Fochabers.
1919. MUNRO, ALEXANDER, Craggie, Rogart, Sutherland.
1922. MUNRO, NEIL, LL.D., Cromalt, Helensburgh.
- 1911.*MURCHIE, JAMES, Penrioch, Kingcase, Prestwick, Ayrshire.
- 1878.*MURRAY, DAVID, M.A., LL.D., F.S.A., 169 West George Street, Glasgow.
1920. MURRAY, Captain H. W., late Technical Assistant, London Museum, Tintern House, Umhria Street, Roehampton, London, S.W. 15.
1920. MURRAY, JAMES, J.P., Bank Agent, Kenwood, Bishopbriggs, Glasgow.
1911. MURRAY, Captain KEITH R., B.A., 27 St Leonard's Terrace, Chelsea, London, S.W. 3.
1884. MURRAY, PATRICK, W.S., 7 Eton Terrace.
- 1905.*MURRAY, P. KEITH, W.S., 19 Charlotte Square.
- 1905.*NAISMITH, WILLIAM W., C.A., 57 Hamilton Drive, Glasgow.
- 1911.*NAPIER, GEORGE G., M.A., 9 Woodside Place, Glasgow.
1907. NAPIER, HENRY M., Milton House, Bowling.
1896. NAPIER, THEODORE, "Magdala," Woodland Street, Essendon, Melbourne, Australia.
1923. NELSON, MRS ANNIE ELIZABETH, Beechwood, Calderstones, Liverpool.
1923. NELSON, PHILIP, M.D., Ch.B., F.S.A., Beechwood, Allerton, Liverpool.
1900. NEWLANDS, The Right Hon. LORD, LL.D., Mauldslee Castle, Carlisle.
1907. NICOLSON, DAVID, C.B., LL.D., M.D., Hanley, Park Road, Camberley, Surrey.
1922. NORRIE, WILLIAM, 156 Crown Street, Aberdeen.
1899. NOVAR, The Right Hon. Viscount, of Raith and Novar, G.C.M.G., LL.D., H.M. Secretary for Scotland, Raith, Kirkcaldy.
1922. OCHTERLONY, CHARLES FRANCIS, Balmadies, Spylaw Bank Road, Colinton.
1921. OGILVY, THOMAS, 165 Princes Street, Dundee.
- 1907.*OKE, ALFRED WILLIAM, B.A., F.I.S., 32 Denmark Villas, Hove, Sussex.
1920. ORD, JOHN, 2 Monteith Row, Glasgow.
1916. ORR, LEWIS P., F.F.A., Manager of the Scottish Life Assurance Co., 3 Belgrave Place.
1921. ORR, STEWART, Corrie House, Corrie, Arran.
1903. PARK, ALEXANDER, Ingleside, Lenzie.
1917. PARK, FRANKLIN A., 149 Broadway, New York.
1922. PATERSON, GEORGE DUNCAN, 3 Balgay Avenue, Dundee.
1915. PATERSON, JOHN WILSON, M.B.E., A.R.I.B.A., Principal Architect, H.M. Office of Works, 11 Abinger Gardens.
1891. PATON, VICTOR ALBERT NOEL, W.S., 31 Melville Street.
1919. PATRICK, JOSEPH, M.A., C.A., Macdonallie, Lochwinnoch.
1914. PATTERSON, T. BAKENDALE, LL.D.S., Carisbrooke, 84 Station Road, Blackpool.
1909. PAUL, ARTHUR F. BALFOUR, Architect, 16 Rutland Square.
- 1871.*PAUL, Sir GEORGE M., LL.D., W.S., Deputy Keeper of the Signet, 16 St Andrew Square.
1879. PAUL, Sir J. BALFOUR, C.V.O., LL.D., Lord Lyon King-of-Arms, 30 Heriot Row.
- 1902.*PAULIN, Sir DAVID, F.F.A., 6 Forbes Street.
1891. PEACE, THOMAS SMITH, Architect, Junction Road, Kirkwall.
1913. PEACOCK, A. WEBSTER, Architect, 4 Bruntsfield Terrace.
1923. PEARSON, Rev. A. F. SCOTT, M.A., B.D., D.Th., F.R.Hist.S., The Manse, West Kilbride.
1904. PEDDIE, ALEXANDER L. DICK, W.S., 13 South Leamonth Gardens.
1922. PIERCE, Miss NORMA L., 61 Anderson Street, Boston, Mass., U.S.A.
1919. PENFOLD, HENRY, Bordersyde, Brampton, Cumberland.
1916. PHILIP, ALEXANDER, LL.B., F.R.S.E., The Mary Acre, Brechin.
1919. PHILLIPS, DAVID RHYNS, F.L.A., Baili Glas, 15 Chaddesley Terrace, Swansea.
1920. FLOWES, WILLIAM ROBERT, F.R.M.S., F.R.A.S., Chapel-Allerton, Leeds.
1921. PORTER, Mrs BLACKWOOD, West Lodge, North Berwick.
- 1901.*PORTLAND, His Grace The Duke of, K.G., Welbeck Abbey, Notts.
1921. POWRIE, Mrs CATHERINE, Earlie Bank, Craigie, Perth.
1918. PRAIN, HENRY, J.P., Helenbank, Longforgan, by Dundee.

- 1911.*PRESTON, FRANK A. B., Architect, Drum-
darroch, 27 Ferguson Avenue, Milngavie.
1905. PRICE, C. REES, Bannits, Broadway, Worcester-
shire.
1906. PRINGLE, ROBERT, 11 Barton Gardens, Davidson's
Mains.
1907. PULLAR, Major HERBERT S., Dunbarnie Cottage-
Bridge of Earn.
1919. PURSELL, JAMES, Elmhurst, Cramond Bridge.
1912. QUICK, RICHARD, Curator of the Russell-Cotes
Art Gallery and Museum, East Cliff, Bourne-
mouth.
1921. RAE, JOHN N., S.S.C., 2 Danube Street.
1906. RAIT, ROBERT SANGSTER, C.B.E., LL.D., H.M.
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Scottish History and Literature, Glasgow
University, 31 Lilybank Gardens, Glasgow.
1920. RAMSAY, Sir WILLIAM M., Hon. D.C.L. (Oxford),
etc., 13 Greenhill Terrace.
- 1908.*RANKIN, WILLIAM BLACK, of Cleddans, 55 Manor
Place.
1906. RAVEN, ALEXANDER JAMES, c/o The Capital and
Counties Bank, Corshill, Ipswich.
1909. REID, ALPHONSO STODART, Bank of England,
Manchester.
- 1897.*REID, Rev. EDWARD T. S., M.A., Ravelston,
994 Great Western Road, Glasgow.
1920. REID, Mrs MARGARET JOHNSTONE, Lauriston
Castle, Davidson's Mains.
1920. REID, THOMAS, M.A., Arnold House, Lanark.
- 1921.*RENNIE, JOHN, Wellerroft, Helensburgh.
1917. RICHARDSON, Rev. ANDREW T., Whyte's Cause-
way Manse, Kirkcaldy.
- 1912.*RICHARDSON, JAMES S., Inspector of Ancient
Monuments, H.M. Office of Works, 4 and 5
Drumsheugh Gardens.
1923. RICHARDSON, JOHN, W.S., 17 India Street.
1896. RICHARDSON, RALPH, W.S., 29 Eglinton
Crescent.
1919. RICHMOND, O. L., M.A., Professor of Humanity,
University of Edinburgh, 5 Belford Place.
1922. RITCHIE, WILLIAM MUIR, 11 Walkinshaw Street,
Johnstone.
1907. ROBE, JAMES, LL.B., 26 Ormisdale Terrace.
- 1898.*ROBERTS, ALEXANDER F., Fairniee, Selkirk.
1905. ROBERTS, Sir JOHN, K.C.M.G., Littlebourne
House, Dunedin, New Zealand.
1914. ROBERTS, J. HUBERT, F.R.G.S., F.S.I., F.A.I.,
61 Wind Street, Swansea.
1916. ROBERTSON, ALAN KEITH, Architect, Viewpark,
12 Russell Place, Trinity.
1923. ROBERTSON, ALEXANDER MACLAREN, J.P.,
Rosemount, Arbroath.
1919. ROBERTSON, GEORGE M., M.D., F.R.C.P.E.,
Professor of Psychiatry, University of
Edinburgh, Tipperlinn House, Morningside
Place.
1910. ROBERTSON, JOHN, J.P., 27 Victoria Road,
Dundee.
- 1886.*ROBERTSON, ROBERT, Holmlea, Dollar.
1915. ROBERTSON, ROBERT BURNS, Resident Architect,
H.M. Office of Works, Windsor Castle, Windsor.
1905. ROBERTSON, W. G. AITCHISON, M.D., D.Sc.,
F.R.C.P.E., The Grange, Ashford, Middlesex.
1914. ROBISON, JOSEPH, 14 Castle Street, Kirkcud-
bright.
- 1916.*RODGER, EDWARD, 1 Clairmont Gardens, Glasgow.
1921. ROGERSON, JOHN, I.A., A.R.I.B.A., 202 Hope
Street, Glasgow.
1905. ROLLO, JAMES A., Solicitor, Argyle House,
Maryfield, Dundee.
- 1872.*ROSEBERY AND MIDLOTHIAN, The Right Hon.
The Earl of, K.G., K.T., D.C.L., LL.D.,
Dalmeny Park.
1876. ROSS, ALEXANDER, LL.D., Architect, Queensgate
Chambers, Inverness.
1922. ROSS, Major JOHN, Woodburn, Auchenreoch,
Milton of Campsie.
1891. ROSS, THOMAS, LL.D., Architect, 14 Saxe-Coburg
Place.
1915. RUSK, J. M., S.S.C., Clinton House, Whitehouse
Loch.
1906. RUSSELL, Rev. JAMES C., D.D., 9 Coates
Gardens.
1914. RUSSELL, JOHN, 323 Leith Walk.
1911. SAMUEL, Sir JOHN SMITH, K.B.E., 13 Park
Circus, Glasgow, W.
1905. SANDS, The Hon. LORD, LL.D., 4 Heriot Row.
- 1903.*SAYCE, Rev. A. H., M.A., LL.D., D.D., Professor
of Assyriology, Oxford, 8 Chalmers Crescent,
Edinburgh, — *Foreign Secretary*.
1912. SCLATER, Rev. HENRY GUY, The Rectory,
Ballachulish, Argyll.
- 1910.*SCOBIE, Captain IAIN H. MACKAY, 1st Seaforth
Highlanders, c/o Messrs Cox & Co., Charing
Cross, London, S.W. 1.
1922. SCOTT, Rev. A. BOYD, M.C., B.D., Minister of
Lansdowne Church, 18 Lilybank Gardens,
Glasgow, W.
1922. SCOTT, GEORGE WAUGH, M.D., Sungei Siput,
Perak, Federated Malay States.

1892. SCOTT, Sir JAMES, J.P., Rock Knowe, Tayport.
 1903. SCOTT, JOHN, W.S., 13 Hill Street.
 1901. SCOTT, J. H. F. KINNAIRD, of Gala, Gala House, Galashiels.
 1923. SCOTT, KEITH STANLEY MALCOLM, M.B.E., B.Sc., Captain R.E.T.A., 27 Osborne Road, Newcastle-upon-Tyne.
 1921.*SCOTT, R. L., 11 Newark Street, Greenock.
 1889. SCOTT-MONCHIEFF, W. G., M.A., Honorary Sheriff-Substitute of Lanarkshire, Whitechurch Rectory, Edware, Middlesex.
 1915. SCRYMGEOUR, NORVAL, Fellow of the Institute of Journalists, Helen Bank, Longforgan, by Dundee.
 1920. SETON, Brevet-Colonel Sir BRUCE, of Abercorn, Bart., C.B., 12 Grosvenor Crescent.
 1913. SHAND, J. HARVEY, W.S., 38 Northumberland Street.
 1919. SHARP, ANDREW, 16 Lomond Road, Trinity.
 1921. SHARP, MARTIN HOWARD, 35 Palmerston Place.
 1917. SHAW, JULIUS ADOLPHUS, Mus.B., Trin. Coll. Dublin, L.Mus., T.C.L., 4 Grosvenor Road, Whalley Range, Manchester.
 1918. SHAW, MACKENZIE S., W.S., 1 Thistle Court.
 1917. SHAW, WILLIAM B., F.R.Hist.Soc., Honorary Curator of the Collections of the Presbyterian Historical Society of England, London, 56 Sandy Lane, Stretford, Manchester.
 1908. SHEARER, JOHN E., 6 King Street, Stirling.
 1920. SHEPPARD, THOMAS, M.Sc., F.G.S., F.R.G.S., Curator, The Municipal Museums, Hull.
 1917. SHIELDS, COURTENAY JOHN, C.A., 141 George Street.
 1913. SIM, Rev. GUSTAVUS AIRD, United Free Church Manse, Kirkurd, Peeblesshire.
 1919.*SIMPSON, Professor JAMES YOUNG, D.Sc., F.R.S.E., 25 Chester Street.
 1880.*SIMPSON, Sir ROBERT R., W.S., 23 Douglas Crescent.
 1919. SIMPSON, WILLIAM DOUGLAS, M.A., 448 Great Western Road, Aberdeen.
 1908. SINCLAIR, COLIN, M.A., F.R.I.B.A., 35 Clifford Street, Ibrox, Glasgow.
 1919. SINCLAIR, JOHN, Craighead Public School, Milton of Campsie, Stirlingshire.
 1907. SKERBINGTON, The Hon. Lord, 12 Randolph Crescent.
 1909. SKINNER, ROBERT TAYLOR, M.A., F.R.S.E., House Governor, Donaldson's Hospital.
 1920. SLEIGH, THOMAS MILLAR, J.P., 38 Queen's Crescent.
 1921. SMART, ROBERT SEMPLE, Journalist, St Hilda, Wornit-on-Tay.
 1922. SMEALL, THOMAS YOUNG, Solicitor, Castlewood, Jedburgh.
 1922. SMITH, ALAN K., F.F.S., 29 Hermitage Gardens.
 1922. SMITH, CAMPBELL, S.S.C., 19 Clarendon Crescent.
 1910. SMITH, DAVID BAIRD, C.B.E., LL.D., 6 Woodlands Terrace, Glasgow.
 1892. SMITH, G. GREGORY, LL.D., Professor of English Literature, The University, Belfast.
 1922. SMITH, JAMES MACDONALD, Colinton.
 1923. SMITH, WILLIAM JAMES, M.C., A.R.I.B.A., Lecturer on Architecture and Building, The Royal Technical College, Glasgow; 5 Rhannan Road, Cathcart, Glasgow.
 1892.*SMYTHE, Colonel DAVID M., Methven Castle, Perth.
 1892. SOMERVILLE, Rev. J. E., D.D., Castellar, Crieff.
 1921. SOUTAR, CHARLES GEDDES, F.R.I.B.A., 15 South Tay Street, Dundee.
 1910.*SPENCER, Colonel CHARLES LOUIS, C.B.E., D.S.O., 5 Great Western Terrace, Glasgow.
 1910.*SPENCER, JOHN JAMES, 5 Great Western Terrace, Glasgow.
 1922. SPENS, THOMAS PATRICK, W.S., 25 Park Circus, Glasgow.
 1903.*STARK, Rev. WILLIAM A., Church Place, Castle Douglas, Kirkcudbright.
 1923. STARLEY, JOHN KEMP, The Manor House, Ryton-on-Dunsmore, Coventry.
 1920. STEPHEN, Rev. WILLIAM, B.D., The Manse, Inverkeithing.
 1901. STEUART, A. FRANCIS, Advocate, University Club, 127 Princes Street.
 1902. STEUART, JAMES, O.B.E., W.S., 25 Rutland Street.
 1922. STEUART, Mrs MACKENZIE, 12 Ramsay Garden.
 1912. STEVENSON, DAVID, Firenze, 93 Trinity Road.
 1895. STEVENSON, JOHN HORNE, M.B.E., K.C., 9 Oxford Terrace.
 1913. STEVENSON, NORMAN, Dechmont View, Sandyhills, Shettleston.
 1913. STEVENSON, PERCY R., 5 North Charlotte Street.
 1922. STEWART, ANDREW, H.M. Inspector of Taxes, 2 Caird Drive, Partick.
 1916. STEWART, CHARLES, W.S., 28 Coates Gardens.
 1922. STEWART, CHARLES, C.A., 306 Broughty Ferry Road, Dundee.
 1879. STEWART, CHARLES POYNITZ, Chesfield Park, Stevenage.
 1917.*STEWART, JOHN ALEXANDER, 104 Cheapside Street, Glasgow.
 1913. STEWART, R. RANNOCH, Ashbourn, Grove Park, Lenzie.

1885. STEWART, Colonel Sir ROBERT KING, K.B.E.,
Murdostoun Castle, Newmains, Lanarkshire.
1914. STEWART, W. BALFOUR, Fir Grove, Park Road
West, Birkenhead.
1920. STEWART, WILLIAM RITCHIE, Merrick, Dal-
mellington, Ayrshire.
1908. STIRTON, Rev. JOHN, B.D., The Manse, Crathie,
Ballater.
1922. STINGER, E. W. SCOBIE, Endsleigh, Wanstead,
E. 11, Essex.
1910. STREUTERS, Sir JOHN, K.C.B., LL.D., 31 Sloane
Gardens, London, S.W.
1897. SULLEY, PHILIP, 38 Netherby Road, Trinity.
1922. SUTHERLAND, ALEXANDER, Rampyards, Watten,
Caithness.
1923. SUTTEL, ARNOLD, M.R.S.I., Hillcroft, Wetherby
Lane, Harrogate.
1897. SUTTIE, GEORGE C., J.P., of Lalathan, Alma
Lodge, St Cyrus, by Montrose.
1916. SWAN, T. AIKMAN, A.R.I.B.A., 42 Frederick Street.
1900. SWINTON, Captain GEORGE S. C., 107 Gloucester
Place, Portman Square, London, W. 1.
1916. TAIT, EDWYN SKYMOUR REID, 82 Commercial
Street, Lerwick.
1910. TAIT, GEORGE HOPE, 26 High Street, Galashiels.
1917. TAYLOR, FRANK J., Assistant Secretary, Young
Men's Christian Association, Newcastle-on-Tyne.
1923. TEMPLE, HERBERT W. FORRESTER, Union Bank
House, Tariatland, Aberdeenshire.
1902. THUN, ROBERT, M.A., M.B., C.M., 25 Aber-
cromby Place.
1920. THOMPSON, Rev. GEORGE, M.A., B.D., T.D.,
J.P., The Manse, Carnbee, Pittenweem.
1906. *THOMPSON, DAVID COUPER, J.P., D.L., Inveravon,
Broughty Ferry.
1921. *THOMPSON, EDWARD JOHN, 6 Windsor Terrace
West, Kelvinside, Glasgow.
1920. THOMPSON, GEORGE CLARK, Barrister-at-Law,
Yager Block, Chendale Street E., Swift Current,
Saskatchewan, Canada.
1911. THOMPSON, JAMES, M.A., LL.B., Solicitor, 1 West
Bell Street, Dundee.
1913. THOMPSON, JAMES, The Cedars, 21 Fortis Green,
East Finchley, London, N. 2.
1918. THOMPSON, JAMES GRAHAME, 120 Maxwell Drive,
Pollokshields, Glasgow.
1922. THOMPSON, JOHN, 9 Carlton Gardens, Glasgow,
N.W.
1913. THOMPSON, JOHN GORDON, S.S.C., 54 Castle Street.
1923. THOMPSON, THEODORE RADFORD, B.A. (Cantab.),
M.R.C.S. (Eng.), 4 Galveston Road, Putney,
London.
1921. THOMSON, THOMAS SAMUEL, 18 Rothesay Place.
1922. THOMSON, WILLIAM, Rosyth, Margaret Drive,
South Govan.
1910. THOMSON, WILLIAM N., Architect, 85 Constitu-
tion Street, Leith.
1898. THORBURN, MICHAEL GRIEVE, Glenormiston,
Innerleithen.
1911. THORBURN, Lt.-Col. WILLIAM, O.B.E., Boreland,
Lockerbie, Dumfriesshire.
1907. THORP, JOHN THOMAS, LL.D., Brunswick House,
54 Princess Road, Leicester.
1910. TODD, HENRY GUICHARDE, Architect (no
address).
1902. *TRAILL, H. LIONEL NORTON, F.R.G.S., Capt.
4th Highland Light Infantry, Grattan Lodge,
Vicarstown, Stradbally, Queen's County,
Ireland.
1917. TRAILL, WILLIAM, C.E., Tankerness House,
Kirkwall, Orkney.
1922. TROTTER, GEORGE CLARK, M.D., Ch.B. (Edin.),
D.P.H. (Aberd.), F.R.S.E., "Braemar," Hasle-
mere Road, Crouch End, London, N. 8.
1922. TURNBULL, JOHN W., Kilbride, Millhouse,
Argyll.
1901. TURNBULL, W. S., Aikenshaw, Roseneath.
1917. *URQUHART, ALASTAIR, D.S.O., 13 Danube
Street.
1921. URQUHART, EDWARD A., 11 Queensferry Street.
1878. *URQUHART, JAMES, N.P., 13 Danube Street.
1905. *USHER, Sir ROBERT, Bart., of Norton and Wells,
Wells, Hawick.
1920. *VARMA, Professor S. P., M.A., Robertson College,
Jubbulpore, C.P., India.
1922. VEITCH, HENRY NEWTON, 30 Coleherne Court,
London, S.W. 5.
1922. VOGEL, Mrs, 4 Cluny Avenue.
1904. WADDELL, JAMES ALEXANDER, of Leadloch, 12
Kew Terrace, Glasgow, W.
1921. WADDELL, J. JEFFREY, Architect, Caldergrove,
Hallside, Lanarkshire.
1909. WALKER, JOHN, M.A., c/o Messrs Bowie & Pinker-
ton, S.S.C., 2 Stafford Street.
1879. WALLACE, THOMAS, Balgownie, Cawdor Road,
Inverness.
1915. WARD, The Venerable Archdeacon ALGERNON,
M.A. (Cantab.), F.R.S.L., The Vicarage, Stowe,
Brampton Bryan, Salop.
1921. WARD, EDWIN, Keeper of the Art and Ethno-
logical Departments, Royal Scottish Museum,
52 Albany Street.

1917. WARNER, REV. GRAHAM NICOLL, M.A., James Place, 387 Strathmartine Road, Downfield, Dundee.
1919. WARR, REV. CHARLES LAING, M.A., St Paul's Parish Church, 70 Union Street, Greenock.
- 1917.*WARRACK, JOHN, 13 Rothesay Terrace.
1923. WARRACK, MALCOLM, 7 Oxford Terrace.
1916. WATSON, DAVID, Fellow, Royal Society of Painter-Etchers, Lond., Bridgend House, Brechin.
1904. WATLING, H. STEWARD, Architect, Manor Close, Cornwall Road, Harrogate.
- 1891.*WATSON, REV. ALEXANDER DUFF, B.D., 433 Great Western Road, Aberdeen.
- 1907.*WATSON, CHARLES B. BOGO, F.R.S.E., Huntly Lodge, 1 Napier Road.
1913. WATSON, G. P. H., Architect, Royal Commission on Ancient and Historical Monuments of Scotland, 4 Drumsheugh Gardens,—Secretary.
1904. WATSON, JOHN, Architect, 27 Rutland Street.
- 1908.*WATSON, JOHN PARKER, W.S., Greystane, Kinellan Road, Murrayfield.
1922. WATSON, HENRY MICHAEL DENNE, C.A., 12 Henderland Road.
1904. WATSON, WALTER CRUM, B.A. Oxon., Northfield, Balerno.
1912. WATSON, WILLIAM J., M.A., LL.D., F.R.S.E., Professor of Celtic Languages, Literature and Antiquities, University of Edinburgh, 8 Spence Street.
- 1907.*WATT, JAMES, W.S., F.F.A., Craiglockhart House, Slateford, Midlothian.
1908. WATT, REV. LAUCHLAN MACLEAN, M.A., B.D., D.D., 1 Athole Gardens, Glasgow, W.
1923. WATT, WILLIAM J. C., M.B., Ch.B., 71 High Street, Paisley.
1920. WAUGH, PERCIVAL, 21 Cluny Gardens.
1879. WEDDERBURN, J. R. M., M.A., W.S., 3 Glencairn Crescent.
- 1884.*WHITE, CECIL, 23 Drummond Place.
1914. WHITE, GEORGE DUNCAN, Seaforth, 15 Marketgate, Crail.
1904. WHITE, JAMES, St Winnin's, Bearsden, Dumbartonshire.
1916. WHITE, JOHN, 18a Arthur Street, Pilrig, Leith.
1903. WHITELAW, ALEXANDER, Gartshore, Kirkintilloch.
- 1902.*WHITELAW, CHARLES EDWARD, I.A., The Laurels, Bridge of Weir, Renfrewshire.
1907. WHITELAW, HARRY VINCENT, Elmhurst, Totnes Road, Paignton, Devon.
1909. WHITTAKER, CHARLES RICHARD, F.R.C.S., F.R.S.E., Lynwood, 27 Hatton Place.
1913. WHITTAKER, PROFESSOR EDMUND T., M.A., Hon. D.Sc., F.R.S., 35 George Square.
1923. WHYTE, WILLIAM, P.O. Box 1831, Johannesburg, S. Africa.
1921. WILKIE, ALEXANDER, 5 Ravelston Terrace.
1908. WILKIE, JAMES, B.L., S.S.C., 108 George Street.
1895. WILLIAMS, REV. GEORGE, Minister of Norrieston U.F. Church, Thornhill, Perthshire.
1897. WILLIAMS, H. MALLAM, Tilehurst, 81 Priory Road, Kew, Surrey.
1908. WILSON, ANDREW ROBERTSON, M.A., M.D., 23 Hose Side Road, Wallasey, Cheshire.
- 1923.*WILSON, REV. S. GORDON F., M.A., B.Litt., A.K.C., F.R.Hist.S., Holy Trinity Vicarage, Gravesend, Kent.
1913. WILSON, REV. THOMAS, B.D., The Manse, Stow, Midlothian.
1921. WILSON, WILLIAM, Advocate, 5 North Charlotte Street.
1912. WILSON, REV. W. B. ROBERTSON, Strathdevon, Dollar.
1916. WINDUST, MRS ESTHER, Sidi-Bou-Said, near Tunis, N. Africa.
1920. WISHART, DAVID, Pittarrow, Abernethy, Perthshire.
1922. WOOD, J. MAXWELL, M.B., C.M. (Edin.), 3 Comely Bank.
1922. WOOD, J. R., 51 Montgomerie Street, Kelvininside N., Glasgow.
1907. WOOD, WILLIAM JAMES, J.P., 266 George Street, Glasgow.
1903. WRIGHT, REV. FREDERICK G., D.D., Incumbent of St John's without the Northgate, Chester, Kingscote, King Street, Chester.
1913. YOUNG, THOMAS E., W.S., Auchterarder.
- 1912.*YULE, THOMAS, W.S., 16 East Claremont Street.

SUBSCRIBING LIBRARIES, ETC.

American Philosophical Society.	Public Library, Aberdeen.
Baillie's Institution, Glasgow.	Public Library, Dundee.
Birmingham Public Libraries—Reference Department.	Public Library of Victoria, Melbourne, Australia.
*Columbia University.	Reform Club, Pall Mall, London, S.W. 1.
Concordia College, Moorhead, Minn., U.S.A.	State Historical Society of Wisconsin, Madison, Wisconsin, U.S.A.
Department of British and Mediæval Antiquities, British Museum.	University College, Dublin.
Falkirk Natural History and Archaeological Society.	University Library, Leeds.
Free Public Library, Boston, Massachusetts, U.S.A.	University of Michigan.
Harvard College, U.S.A.	University of Pennsylvania, Philadelphia, Pa., U.S.A.
Institute of Accountants and Actuaries in Glasgow.	Victoria University of Manchester.
John Rylands Library, Manchester.	Yale University Library, New Haven, Connecticut, U.S.A.

LIST OF THE CORRESPONDING MEMBERS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND.

NOVEMBER 30, 1923.

- | | |
|---|---|
| 1922. FAIRBAIRN, ARCHIBALD, Wellwood, Muirkirk,
Ayrshire. | 1915. MATHIESON, JOHN, F.R.S.E., 42 East Claremont
Street. |
| 1913. FRASER, JOHN, 68 Restalrig Road, Leith. | 1915. MORRISON, MURDO, Lakefield, Bragar, Lewis. |
| 1911. GOUDIE, JAS. M., J.P., Lerwick, Shetland. | 1911. NICOLSON, JOHN, Nybater, Auchengill, by Wick,
Caithness. |
| 1913. LEVY, MRS N., Red Gables, Carson College,
Flourtown, Pa., U.S.A. | 1903. RITCHIE, JAMES, Hawthorn Cottage, Port Elphin-
stone, Inverurie. |
| 1908. MACKENZIE, WILLIAM, Procurator-Fiscal, Ding-
wall. | 1921. URQUHART, ANDREW, M.A., J.P., The School-
house, Bonar Bridge, Sutherland. |
| 1904. MACKIE, ALEX., Pitressie, Abernethy. | |

LIST OF HONORARY FELLOWS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1923.

[According to the Laws, the number is limited to TWENTY-FIVE.]

1885.

Dr ERNEST CHANTRE, The Museum, Lyons.

1892.

Professor LUIGI PIGORINI, Director of the Royal Archæological Museum, Rome.

1897.

Sir W. M. FLINDERS PETRIE, D.C.L., LL.D., F.B.A., F.R.S., Edwards Professor of Egyptology in University College, London, W.C. 1.

Dr SOPHUS MÜLLER, Secretary of the Royal Society of Northern Antiquaries, and Director of the National Museum, Copenhagen.

1900.

5 Rev. S. BARING GOULD, Lew Trenchard, North Devon.

1908.

Sir ARTHUR JOHN EVANS, M.A., D.C.L., Youghbury, near Oxford.

SALOMON REINACH, Director of the National Museum of Antiquities of France, St Germain-en-Laye.

Professor H. DRAGENDORFF, Freiburg i. Baden, Johan von Weirhstrasse 4.

Professor E. RITTERLING, Director of the Römisch-Germanische Kommission, Dotzheimerstrasse 38^{II} Wiesbaden.

1919.

10 LÉON COUTH, Correspondant du Ministère de l'Instruction Publique, etc., etc., Les Andelys, Eure, France.

RENÉ CAGNAT, Secrétaire Perpétuel de l'Académie des Inscriptions et Belles Lettres, Professeur au Collège de France, Palais de l'Institut (3 rue Mazarine), Paris.

1921.

The Right Rev. Bishop G. F. BROWNE, 2 Campden House Road, Kensington, London, W. 8.

1923.

M. L'ABBÉ H. BREUIL, D.L.C., Professeur à l'Institut de Paléontologie Humaine, Paris, 110 Rue Demours, Paris.

Professor FRANZ CUMONT, 19 Corso d'Italia, Rome.

15 G. F. HILL, M.A., F.B.A., LL.D., Keeper of Coins and Medals, British Museum, London, W.C. 1.

Dr BERNHARD SALIN, State Antiquary-in-Chief, Stockholm.

FRANK GERALD SIMPSON, 23 Princess Royal Terrace, Scarborough.

Mrs ARTHUR STRONG, Litt.D., LL.D., F.S.A., Life-Fellow of Girton College, Cambridge, and Assistant

Director of the British School at Rome, Valle Giulia, Rome.

A. M. TALLGREN, Professeur à l'Université, Dorpat, Esthonia.

LIST OF THE LADY ASSOCIATES
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND,
NOVEMBER 30, 1923.

[According to the Laws, the number is limited to TWENTY-FIVE.]

1894.

Miss EMMA SWANN, Walton Manor, Oxford.

1900.

Miss M. A. MURRAY, Edwards Library, University College, London, W.C. 1.
3 Mrs E. S. ARMITAGE, Westholm, Rawdon, Leeds.

SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

- | | |
|---|--|
| <p>Architectural, Archaeological, and Historic Society
of Chester and North Wales.</p> <p>Berwickshire Naturalists' Club.</p> <p>Bristol and Gloucestershire Archaeological Society.</p> <p>British Archaeological Association.</p> <p>Buchan Field Club.</p> <p>Buteshire Natural History Society.</p> <p>Cambrian Archaeological Association.</p> <p>Cambridge Antiquarian Society.</p> <p>Cumbetland and Westmorland Antiquarian and
Archæological Society.</p> <p>Derbyshire Archæological and Natural History
Association.</p> <p>Dumfriesshire Natural History and Antiquarian
Society.</p> <p>Edinburgh Architectural Association.</p> <p>Elgin Literary and Scientific Society.</p> <p>Essex Archæological Society.</p> <p>Gaelic Society of Inverness.</p> <p>Geological Society of Edinburgh.</p> <p>Glasgow Archæological Society.</p> <p>Hampshire Field Club and Archæological Society.</p> <p>Hawick Archæological Society.</p> <p>Historic Society of Lancashire and Cheshire.</p> <p>Institute of Archæology, Liverpool.</p> <p>Kent Archæological Society.</p> <p>New Spalding Club.</p> <p>Perthshire Society of Natural Science.</p> <p>Royal Anthropological Institute.</p> <p>Royal Archæological Institute of Great Britain
and Ireland.</p> <p>Royal Commission on Ancient and Historical
Monuments of Scotland.</p> <p>Royal Commission on the Ancient and Historical
Monuments and Constructions in Wales and
Monmouthshire.</p> | <p>Royal Historical Society.</p> <p>Royal Irish Academy.</p> <p>Royal Numismatic Society.</p> <p>Royal Society of Antiquaries of Ireland.</p> <p>Scottish Ecclesiological Society.</p> <p>Shropshire Archæological Society.</p> <p>Society for the Promotion of Roman Studies.</p> <p>Society of Antiquaries of London.</p> <p>Society of Antiquaries of Newcastle-upon-Tyne.</p> <p>Society of Architects.</p> <p>Somersetshire Archæological and Natural History
Society.</p> <p>Stirling Natural History and Archæological Society.</p> <p>Surrey Archæological Society.</p> <p>Sussex Archæological Society.</p> <p>Thoresby Society.</p> <p>Viking Club.</p> <p>Wiltshire Archæological Society.</p> <p>Yorkshire Archæological Society.</p>
<p>Archæological Survey of India.</p> <p>British School at Rome.</p> <p>Colombo Museum, Ceylon.</p> <p>Provincial Museum, Toronto, Canada.</p> <p>Royal Canadian Institute, Toronto.</p> <p>University Museum, Dunedin, New Zealand.</p>
<p style="text-align: center;">FOREIGN SOCIETIES, UNIVERSITIES,
MUSEUMS, &c.</p> <p>Académie des Inscriptions et Belles Lettres, Paris.</p> <p>Alterthumsgesellschaft, Königsberg.</p> <p>Anthropologische Gesellschaft, Vienna.</p> <p>Antiquarische Gesellschaft, Zürich.</p> <p>Bosnisch-Herzegovinisches Landes-Museum, Sara-
jevo.</p> |
|---|--|

Bureau of Ethnology, Washington.
 California University.
 Christiania University.
 Commissione Archeologica Comunale di Roma.
 Cornell University Library, Ithaca, New York.
 Ecole d'Anthropologie de Paris.
 Faculté des Sciences de Lyon.
 Foreningen til Norske Fortidsminde-merkens
 Bevaring.
 Gesellschaft für Nützliche Forschung, Trier.
 Göteborg och Bohusläns Fornminnesföreningen.
 Göttingen University.
 Historische und Antiquarische Gesellschaft, Basel.
 Historische Verein für Niedersachsen.
 Institut de Paléontologie Humaine, Paris.
 Junta Superior de Excavaciones y Antigüedades,
 Madrid.
 Junta Para Ampliación de Estudios—Comisión de
 Investigaciones Paleontológicas y Prehistóricas,
 Madrid.
 Kiel University.
 Kongelige Norske Videnskabs Selskab, Trondhjem.
 Leipzig University.
 Musée Guimet, Paris.
 Musée National Suisse à Zurich.
 Museum, Bergen, Norway.
 Museum of Northern Antiquities, Christiania.
 National Bohemian Museum, Prague, Czecho-
 slovakia.
 National Museum of Croatia.
 Nordiska Museet, Stockholm.
 Norsk Folkemuseum, Christiania.
 Notgemeinschaft der Deutschen Wissenschaft,
 Berlin.
 Peabody Museum, Cambridge, Mass., U.S.A.
 Prähistorische Kommission der Kaiserliche
 Akademie der Wissenschaften in Wien.
 Reale Accademia dei Lincei, Rome.
 Rijks-Museum van Oudheden, Leiden.
 Römisch-Germanische Kommission des Kaiser-
 lichen Archäologischen Instituts, Frankfurt
 am Main.
 Royal Academy of History and Antiquities,
 Stockholm.
 Royal Society of Northern Antiquaries, Copen-
 hagen.
 Smithsonian Institution, Washington, U.S.A.
 Societa Romana di Antropologia, Rome.
 Société d'Anthropologie de Paris.

Société des Antiquaires de l'Ouest.
 Société Archéologique d'Alexandrie.
 Société Archéologique de Constantine, Algeria.
 Société Archéologique du Midi de la France.
 Société Archéologique de Montpellier.
 Société Archéologique de Moravie.
 Société Archéologique de Namur.
 Société des Bollandistes, Brussels.
 Société des Sciences de Semur (*Pro Alesia*).
 Société Finlandaise d'Archéologie, Helsingfors.
 Société d'Histoire et d'Archéologie de Gand.
 Société Nationale des Antiquaires de France.
 Société Préhistorique Polonaise.
 Société Royale d'Archéologie de Bruxelles.
 Städtisches Museum für Völkerkunde, Leipzig.
 University Library, Tartu, Esthonia.
 Upsala University.
 Verein für Nassauische Alterthumskunde, Wies-
 baden.
 Verein von Alterthumsfreunden im Rheinlande,
 Bonn.
 Wiener Prähistorische Gesellschaft.

PERIODICALS.

L'Anthropologie, Paris.
Bulletin archéologique polonais, Warsaw.

LIBRARIES, BRITISH.

Advocates' Library, Edinburgh.
 Athenæum Club Library, London.
 Bodleian Library, Oxford.
 British Museum Library.
 Chetham's Library, Manchester.
 Faculty of Procurators' Library, Glasgow.
 Free Library, Edinburgh.
 Free Library, Liverpool.
 Mitchell Library, Glasgow.
 National Library of Wales, Aberystwyth.
 Ordnance Survey Library, Southampton.
 Public Record Office Library, London.
 Royal Library, Windsor.
 Royal Scottish Museum Library, Edinburgh.
 Scottish National Portrait Gallery Library.
 Scottish Record Office, Historical Department.
 Signet Library, Edinburgh.
 Trinity College Library, Dublin.
 United Free Church College Library, Edinburgh.

University Library, Aberdeen.
 University Library, Cambridge.
 University Library, Edinburgh.
 University Library, Glasgow.
 University Library, St Andrews.
 Victoria and Albert Museum Library, London.

LIBRARIES, FOREIGN.

Bayerische Staats-bibliothek, Munich, Bavaria.

Bibliothèque d'Art et d'Archéologie, Université de
 Paris.
 National Library, Paris.
 National Library, Vienna.
 Newberry Library, Chicago, U.S.A.
 Preussische Staats-bibliothek, Berlin.
 Public Library, Hamburg.
 Royal Library, Copenhagen.
 Royal Library, Stockholm.
 Sächsische Landes-bibliothek, Dresden.

PROCEEDINGS
OF THE
SOCIETY OF ANTIQUARIES OF SCOTLAND

HUNDRED AND FORTY-THIRD SESSION, 1922-1923

ANNIVERSARY MEETING, 30th November 1922.

JAMES CURLE, W.S., in the Chair.

Mr W. K. Dickson, LL.D., and Mr W. G. Black, C.B.E., LL.D., were appointed Scrutineers of the Ballot for Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

The Right Hon. LORD CARMICHAEL of Skirling, G.C.S.I., G.C.I.E., K.C.M.G.

Vice-Presidents.

The Right Hon. LORD ABERCROMBY, LL.D.
GEORGE NEILSON, LL.D.
Professor THOMAS H. BRYCE, M.D., F.R.S.

Councillors.

Sir JOHN R. FINDLAY, K.B.E., LL.D.	} <i>Representing the Board of Trustees.</i>	CHARLES EDWARD WHITELAW.
The Hon. HEW HAMIL- TON DALRYMPLE.		Lieut.-Col. W. ANSTRUTHER-GRAY.
Sir JAMES ADAM, C.B.E.	} <i>Representing the Treasury.</i>	DOUGLAS P. MACLAGAN, W.S.
Sir ANDREW N. AGNEW, Bart.		JAMES URQUHART.
WILLIAM GEORGE BLACK, C.B.E., LL.D.		JOHN BRUCE.
		Colonel CHARLES L. SPENCER, C.B.E., D.S.O.
		Brigadier-General R. G. GORDON- GILMOUR, C.B., C.V.O., D.S.O.

Secretaries.

ROBERT SCOTT-MONCRIEFF, W.S. | G. P. H. WATSON.

For Foreign Correspondence.

The Rev. Professor A. H. SAYCE, M.A., | Professor G. BALDWIN BROWN.
LL.D., D.D.

Treasurer.

J. BOLAM JOHNSON, C.A.

Curators of the Museum.

JAMES CURLE, W.S. | ALEXANDER O. CURLE.

Curator of Coins.

GEORGE MACDONALD, C.B., F.B.A., D.Litt., LL.D.

Librarian.

WILLIAM K. DICKSON, LL.D.

A Ballot having been taken, the following were elected Fellows:—

ARTHUR REID ANDERSON, 8 Westbourne Terrace, Glasgow, W.

Rev. JOHN BAIN, St Bride's Manse, West Kilbride.

Dr SAMUEL SAXON BARTON, O.B.E., The Beach, St Michael's Hamlet,
Liverpool.

GEORGE EUSTACE BRUNWIN, Haverings, Rayne, Braintree, Essex.

JOHN MACLEOD CAMPBELL, The Captain of Saddell Castle, Glen Saddell, by
Carrodale, Argyll.

Sheriff JOHN MACMASTER CAMPBELL, Norwood, Campbeltown, Argyll.

- ARTHUR STANLEY CARRUTHERS, Naworth House, 28 Foxley Hill Road, Purley, Surrey.
- RONALD GILLAN CLOUSTON, L.R.C.P. (Edin.), L.R.C.S. (Edin.), 32 Barrington Drive, Glasgow.
- EDWIN BLAIR CUNYNGHAME, Broomfield, Moniaive, Dumfriesshire.
- JOHN CURRIE, 5 Gilmore Place.
- GEORGE BROWN DEAS, Architect and Civil Engineer, 78 Nicol Street, Kirkcaldy.
- EDWARD DWELLY, Wellington Avenue, Fleet, Hants.
- RICHARD VERNON FAVELL, M.R.C.S., L.R.C.P., 299 Glossop Road, Sheffield.
- JOHN ARNOLD FLEMING, Locksley, Helensburgh.
- Captain The Rev. JOSEPH R. FRASER, F.R.S.E., United Free Church Manse, Kinneff, Bervie.
- WILLIAM FYFE, F.S.Sc., 103 Clive Road, Portsmouth.
- Rev. WILLIAM DEY FYFE, B.D., The Manse, Broughty Ferry.
- Mrs BEATRICE M. R. GREGORSON, 17 Cornwall Street.
- JOHN HAMILTON, Punta Loyola, Patagonia, South America.
- ALEXANDER MACKENZIE HAY, Editor of *The Statist*, 46 Lancaster Gate, London, W.
- Mrs EDITH M. B. HUGHES, Architect, 27 Ashton Terrace, Glasgow, W.
- PETER JOPP, Cabrach, Huntly, Banffshire.
- ALEXANDER KEILLER of Morven, Ballater, Aberdeenshire.
- WALTER G. KLEIN, F.S.A., 24 Belsize Park, London, N.W. 3.
- Miss FLORENCE BEATRICE KNEEN, Ballacrye, Ballaugh, Isle of Man.
- Rev. R. SMITH MACKINTOSH, Hon.C.F., Minister of St Margaret's Parish Church, St Margaret's Manse, Arbroath.
- THOMAS M'LAREN, Burgh Engineer, Redcliffe, Barnhill, Perth.
- ALEXANDER MARSHALL MACKENZIE, LL.D., R.S.A., F.R.I.B.A., 173A Union Street, Aberdeen.
- GEORGE MACGREGOR MARTIN, 5 West Park Gardens, Dundee.
- Lieut.-Colonel J. M. MITCHELL, O.B.E., M.C., M.A., Secretary, Carnegie United Kingdom Trust, Viewfield, Dunfermline.
- Professor H. CARLTON S. MORRIS, University of Trinity College, Toronto, Canada.
- GEORGE DUNCAN PATERSON, 3 Balgay Avenue, Dundee.
- Miss NORMA L. PEIRCE, 61 Anderson Street, Boston, Mass., U.S.A.
- GEORGE WAUGH SCOTT, M.D., Sungei Siput, Perak, Federated Malay States.
- THOMAS YOUNG SMEALL, Solicitor, Castlewood, Jedburgh.
- THOMAS PATRICK SPENS, W.S., 25 Park Circus, Glasgow.
- Mrs MACKENZIE STEUART, 12 Ramsay Garden.
- ALEXANDER SUTHERLAND, Ramyards, Watten, Caithness.
- GEORGE CLARK TROTTER, M.D., Ch.B. (Edin.), D.P.H. (Aberd.), F.R.S.E., "Braemar," Haslemere Road, Crouch End, London, N. 8.
- Mrs VOGEL, 4 Cluny Avenue.
- HENRY MICHAEL DENNE WATSON, C.A., 12 Henderland Road.
- J. MAXWELL WOOD, M.B., C.M. (Edin.), 3 Comely Bank.
- J. R. WOOD, 51 Montgomerie Street, Kelvinside N., Glasgow.

4 PROCEEDINGS OF THE SOCIETY, NOVEMBER 30, 1922.

The following list of Members deceased since the last Annual General Meeting was read:—

Honorary Fellow.

EMILE CARTAILHAC, 5 Rue de la Chainé, Toulouse	Elected. 1900
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Corresponding Member.

JOHN SINCLAIR, St Ann's, 7 Queen's Crescent	Elected. 1906
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Fellows.

HUGH ALLINGHAM, M.R.I.A., The Mall, Ballyshannon, Co. Donegal	Elected. 1908
WILLIAM BELL, Royal Bank House, Maybole	1877
HENRY BEVERIDGE, Pitreavie House, Dunfermline	1886
WILLIAM BLACK, St Mary's Priory, Kirkcaldy	1916
The Most Hon. THE MARQUESS OF BREADALBANE, K.G., Craig, Dalmally	1884
PATRICK WILLIAM CAMPBELL, W.S., 25 Moray Place	1882
P. MACGREGOR CHALMERS, LL.D., Architect, 95 Bath Street, Glasgow	1890
Sir THOMAS GLEN COATS, Bart., C.B., Ferguslie, Paisley	1891
CHARLES RENNIE COWIE, Woodend House, Partickhill, Glasgow	1921
THOMAS CRAIG-BROWN, Woodburn, Selkirk	1892
J. J. DALGLEISH, Brankston Grange, Bogside Station, Alloa	1879
DAVID C. E. ERSKINE of Linlathen, Linlathen House, Broughty Ferry	1889
JAMES S. FLEMING, 9 Douglas Terrace, Stirling	1895
HUGH ERNEST FRASER, M.A., M.D., Medical Superintendent, Royal Infirmary, Dundee	1898
JOHN HARRISON, C.B.E., LL.D., D.L., J.P., Rockville, Napier Road	1887
JOHN KENNEDY, M.A., 25 Abingdon Street, Westminster, London, S.W. 1	1880
Miss KATE JOHNSTONE KIRKE, Hilton, Burntisland	1912
GEORGE M. LOW, 11 Moray Place	1902
Rev. W. T. LYON, Tantallon Lodge, North Berwick	1915
WILLIAM MACMATH, 16 St Andrew Square	1875
Rev. W. M. MUNRO, Withdean Hall, Brighton, Sussex	1890
JOHN NOTMAN, F.F.A., 176 Newhaven Road	1898
W. T. OLDRIEVE, F.R.I.B.A., 13 Braid Avenue	1904
CHARLES OWER, Benora, Broughty Ferry	1901
Sir JOHN RANKINE, K.C., LL.D., Professor of Scots Law, University of Edinburgh, 23 Ainslie Place	1879
ALEXANDER REA, Havalahalli Estate, c/o Postmaster, Yelahanka, Bangalore, Mysore State, India	1899
CHARLES S. ROMANES, C.A., 3 Abbotsford Crescent	1910
A. K. STEWART, 1 Lynedoch Place	1911
Major-General Sir ALEXANDER BRUCE TULLOCH, K.C.B., C.M.G., Hesketh House, Torquay	1899
GEORGE WILLIAMSON, J.P., of Westquarter, Lanarkshire, Atholl Lodge, 7 Spylaw Road	1917

The meeting resolved to record their sense of the loss the Society had sustained in the death of these members.

The Secretary read the following Report by the Council on the affairs of the Society for the year ending 30th November 1922, which, on the motion of the Chairman, was unanimously adopted:—

The Council beg to submit to the Fellows of the Society their Report for the year ending 30th November 1922.

Fellowship.—The total number of Fellows on the roll at 30th November 1921 was 720
At 30th November 1922 the number was 750
being an increase of 30

While the Council feel that the increase in the membership of the Society is a matter for sincere congratulation, they consider that the efforts to induce candidates to seek election should not be relaxed.

There were 68 new Fellows added to the roll and 1 reponed during the year, while 30 died, 5 resigned, and 4 allowed their membership to lapse. The roll of Honorary Fellows is reduced by the death of Emile Cartailhac of Toulouse.

Emile Cartailhac passed away on 25th November 1921 at an advanced age, at Geneva, where he had gone to deliver a series of lectures. Cartailhac, who is recognised as one of France's leading archæologists, at the outset of his career contributed to Mortillet's *Matériaux pour l'Histoire de l'Homme*, a work with which he had a more intimate connection latterly as proprietor and editor. He was perhaps best known to us by his work on the Cave Paintings at Altamira in Spain, which was written in conjunction with the Abbé Breuil.

In the death of Mr John Notman, Treasurer from 1899 until this year, the Society has lost an office-bearer untiring in its service; his efficient conduct of our affairs materially contributed to their present sound financial condition.

In the list of ordinary Fellows deceased will be found the name of the Marquess of Breadalbane, an ardent collector of Scottish silver and tokens, and of Dr John Harrison, who found time in a busy life to become the historian of Holyrood.

Through the death of Sir Thomas Glen Coats, Bart., the Society loses a generous benefactor. The collection of Scottish coins formed by his father, Thomas Coats of Ferguslie, and presented by Sir Thomas and the family, is one of the most munificent donations ever received by the Society.

We have to regret the loss of Mr David C. E. Erskine of Linlathen, who, as Chairman of the Board of Trustees of the National Galleries of Scotland, was often able to be of great service to the Society.

Mr Charles S. Romanes, who passed away in October, was an antiquary keenly interested in Scottish genealogies. Latterly he had acquired Norham Castle, which he presented to the nation, and at the time of his death he was engaged in an extensive excavation at Coldingham Priory which was yielding important results.

Mr Thomas Craig-Brown was widely known as an authority on Border antiquities, customs, and folklore. His *History of Selkirkshire*, published in 1886, was a most valuable addition to Scottish county histories.

In the death of Mr W. T. Oldrieve and of Dr Macgregor Chalmers the Society has lost two distinguished architects. Mr Oldrieve was elected a Fellow of the Society in 1904, served on the Council from 1909 to 1912 and as a Vice-President from 1912 to 1915. He was a member of the Royal Commission on Ancient Monuments (Scotland), and in his official capacity as Principal Architect for Scotland of H.M. Office of Works was called upon to conserve many important historic monuments under the Ancient Monuments Acts, a duty which he at all times performed with due regard to maintenance of historic interest. His scholarly account of the excavation of David's Tower in Edinburgh Castle, conducted by H.M. Office of Works under his supervision, is printed in vol. xlviii. of the *Proceedings*.

Dr Macgregor Chalmers was recognised by his colleagues as an expert in ecclesiastical work, and in course of an extensive practice carried out many important restorations of Scottish churches. Despite the many calls upon his time, he was a prolific writer on Scottish mediæval architecture.

Mr Charles R. Cowie, who had only recently become a Fellow, was a generous friend of the Society. His interests were more literary and historical than archaeological, and he possessed a very fine collection of Burns manuscripts.

Sir James Adam, C.B.E., King's and Lord Treasurer's Remembrancer, has joined the Council as Representing the Treasury in succession to Sir Kenneth J. Mackenzie, Bart., who has retired.

On the resignation of Mr John Notman, Mr J. Bolam Johnson, C.A., was appointed Interim Treasurer of the Society till the Annual General Meeting. His name comes up for ballot at this time.

Proceedings.—An advance copy of the *Proceedings* for the past year lies on the table, from which it will be seen that the number of papers

read before the Society was twenty-four, being one more than was read in the previous year. On a general classification it may be said that fourteen deal with prehistoric and ten with historic subjects.

The Abbé Breuil of Paris makes an important contribution to the pre-history of Scotland in his communication "Observations on the Pre-Neolithic Industries of Scotland." Under the joint authorship of Mr James E. Cree and Mr A. O. Curle the results of the excavations on Traprain Law during the summer of 1921 are reported. The interesting discovery in Tiree of cup-markings on an ecclesiastical site and in association with crosses is described by Mr Ludovic MacLellan Mann. Other cup-markings are noted by Mr J. H. Dixon; while the Rev. R. S. G. Anderson records a most interesting spiral cut on a rock surface in Wigtownshire. Mr J. Graham Callander, Director of the Museum, has described the very important discovery of an earthenware pot in a mediæval grave at Dunbar, and a series of hoards of bronze implements recently acquired by the Museum. He has also placed on record a full description of the large hoard of bronze weapons found in Duddingston Loch, which, though the first donation of relics to the Society, has not until now been described. A description of the coins in the Cowhill Hoard is furnished by Dr George Macdonald. This hoard contained several unique coins and yielded rather conflicting evidence on the chronology of the three-quarter face groat. Mr W. Douglas Simpson in his paper on Huntly Castle traces the development of the structure from a Norman earthwork to the present building, and details its history from the Civil War; while to Mr Van de Put is due an account of the Monypenny Breviary, a magnificent early sixteenth-century French manuscript prepared for the use of a Scottish family resident in France. No fewer than seventy-two of its pages are devoted to illustrations, and Mr Van de Put identifies the work as of the school of Bourges.

The Museum.—It is with satisfaction that the Council are able to announce that the rearrangement and remounting of the collections in the historic and prehistoric galleries have now almost been completed, and that these rooms will be opened to the public at an early date.

The additions to the collections, though satisfactory, are not nearly so numerous as in the last two years, which, however, were quite abnormal in this respect; 525 objects have been received as donations, and 40 have been purchased.

Among the accessions may be mentioned a food-vessel urn and fragments of another, found in a cairn at Drannandow, Stewartry of Kirkcudbright, presented by the Earl of Galloway; two Roman sculptured slabs from Nethercroy, presented by the Directors of Carron Company;

the sculptured cross-slab from Hilton of Cadboll, presented by Captain Macleod of Cadboll; a slab bearing a runic inscription from an old church at the Broch of Birsay, Orkney, presented by Mr T. Stanger of Walkerhouse; a number of relics from a kitchen-midden near Galson, Lewis, presented by Mr N. Mackay and Mr John Morrison; a small collection of objects found during the restoration of Orchardton Tower, presented by Mrs Robinson Douglas of Orchardton, and a late Celtic bronze finger-ring, presented by Major and Mrs Broun-Lindsay of Wellwood.

As many as three hoards of bronze implements have been acquired during the year: one, consisting of a razor and a knife, from Quoykea Moss, Orkney, was presented by the Earl of Ronaldshay; and another, consisting of two flat axes, from Nairnshire, by Mr James Curle; while the third, consisting of three flat axes, two knives, and an armlet, from Auchnacree, Forfarshire, was purchased. It is most gratifying that these hoards should have come to the Museum, as they include types of objects found in association for the first time in Scotland.

A beautiful little enamelled bronze brooch of Early Iron Age date, in the form of a cock, found in Bow Castle broch near Bowland, Gala Water, was also purchased.

The most cordial thanks of the Society are again due to the Earl of Balfour, not only for permitting the excavations on Traprain Law to be continued, but for so generously presenting the relics found to the Museum.

The most important purchase has been that of the Guthrie Bell and Bell-Shrine. There is only one other Scottish example of this class of relic—the shrine and bell from Kilmichael Glassary, which are also in the Museum.

Through the King's Remembrancer twenty-five coins from the Cowhill, Whitburn, hoard were acquired. These range in date from Robert III. to James IV., and include a unique Edinburgh half-groat of James III.

Excavations.—Another summer's excavation has been carried out on Traprain Law, the work, which lasted four and a half months, having once more been continuously supervised by Mr Cree. We have been enabled to carry on the excavations chiefly through the continued generosity of Mr John Bruce, who has again contributed £100, and of the Carnegie Trust, who have made a further grant of a similar amount. Mr Bruce has also most kindly given £50 to be expended on the excavation of a Roman site. In addition to these gifts, a friend of the Society who desires to remain anonymous has presented £100 for the purposes of excavation and the purchase of a special relic.

At Traprain the greater part of the season was devoted to the examination of the ground at the northern end of the area already excavated, and, although the relics recovered have not been so numerous as in past years, they include a number new to archæology. At the end of the season an examination of one of the gateways of the fort revealed some interesting structural features.

The Gunning Fellowship.—The Gunning Fellowship for 1922 was awarded to Mr A. J. H. Edwards, Assistant Keeper of the Museum, for the purpose of carrying out the excavation of two dilapidated cairns at Drannadow and of a hut-circle in Knockman Wood, Stewartry of Kirkcudbright. Important structural features were revealed and relics secured.

The Library.—Besides a large number of publications of learned societies, etc., received by way of exchange and by subscription, 54 books have been added to the Library by donation, and 9 by purchase, as well as 2 manuscripts.

The Rhind Lectureship.—The Rhind Lecturer for the current year is Mr C. R. Peers, the subject of whose lectures is "Monastic Building in Britain." The course will be delivered in January next.

Dr H. R. Hall, British Museum, has been appointed lecturer for 1923, his subject being "Ægean Archæology"; and Professor Thomas Bryce for 1924, the lectures to deal with the Early Races of Scotland.

The Chalmers-Jervise Prize.—It was decided to advertise again for essays in connection with the Chalmers-Jervise bequest, and the area selected was Perthshire. Notwithstanding wide advertisement, only two essays were received. The prize was awarded to Mr R. R. Boog Watson for his essay entitled "The Deuchny Hill Fort."

CARMICHAEL,
President.

The Treasurer read the annual statement of the Society's Funds, which was ordered to be printed and circulated among the members; and a hearty vote of thanks was accorded to Mr J. Bolam Johnson for his gratuitous services as Treasurer.

MONDAY, 11th December 1922.

GEORGE MACDONALD, C.B., F.B.A., D.Litt., LL.D.,
in the Chair.

A Ballot having been taken, the following were elected Fellows:—

WILLIAM MACDONALD BAIRD, F.F.S., 50 George Street.

ALEXANDER CRUNDALL, Royal Societies Club, St James's Street,
London, S.W.1.

JOHN GILLESPIE, Architect, 56 Kenmure Street, Pollokshields, Glasgow.

WILLIAM GRANT GRIEVE, 10 Queensferry Street.

WILLIAM WIGHT HUNTER, Belmont, Strichen Road, Fraserburgh.

CAMPBELL SMITH, S.S.C., 19 Clarendon Crescent.

CHARLES STEWART, C.A., 306 Broughty Ferry Road, Dundee.

E. W. SCOBIE STRINGER, Endsleigh, Wanstead, London, E. 11.

The following Donations to the Museum, received during the recess from 8th May to 30th November, were intimated and thanks voted to the donors:—

- (1) By The Right Hon. THE EARL OF BALFOUR and VISCOUNT TRAPRAIN of Whittinghame, K.G., through the Excavation Committee.

Objects recovered from Traprain Law during the summer of 1921.

- (2) By G. P. H. WATSON, Secretary.

Mould of red sandstone (fig. 1), imperfect, 11½ inches by 6 inches by



Fig. 1. Sandstone Mould from Dunsapie.

3⅓ inches, with matrices for a ring, for part of another, and for objects of horse-shoe and dumb-bell shape on one face, and for a bar on the other;

found in the fort on Dunsapie, Arthur's Seat. This mould bears a strong resemblance to one found in a "Pict's House"—probably a hut-circle—at Dorzel, Alford, Aberdeenshire,¹ which also had cut upon it matrices for casting a dumb-bell-shaped object, a horse-shoe-shaped object, and bars or ingots.

(3) By MUIRHEAD MOFFAT, F.S.A. Scot.

Bronze Pin, with free ring head, $5\frac{5}{16}$ inches long, from Dunkeld, Perthshire.

(4) By Professor ZAMMIT, C.M.G., M.D., Hon. D.Litt. (Oxon.), Curator of Valetta Museum, Malta.

Thirty-five fragments of Neolithic and Bronze Age Pottery and half of a Stone Whorl, from Hal-Ginwi and Hal-Tarxien, Malta.

(5) By JAMES RITCHIE, D.Sc., Royal Scottish Museum.

Brow and Horn Cores of Red Deer, with attached antlers cut across so as to form two sockets, locality unknown.

(6) By Mrs ROBINSON DOUGLAS of Orchardton.

Objects found by H.M. Office of Works while excavating at Orchardton Tower, Stewartry of Kirkcudbright:—

Carved Bone Handle, $4\frac{5}{16}$ inches long, $1\frac{1}{16}$ inch in diameter at top, perforated; Glass Phial, $2\frac{5}{16}$ inches long; five Brass Buckles; two Brass Rings; Iron Ring, $\frac{1}{8}$ inch in diameter; Disc of Slate with incised radiating lines on one face, $1\frac{1}{8}$ inch and 1 inch in diameter; four Stone Whorls; Whorl of Pottery; Stone Disc, $1\frac{3}{8}$ inch in diameter, $\frac{1}{2}$ inch thick; a Tobacco-pipe Head of seventeenth century and two of eighteenth century; nineteen Coins, sixteenth to eighteenth century, and one Croraguel Penny.

(7) By DAVID SMITH, 39 Princes Street, Perth.

Pair of Spectacles, with tortoiseshell and iron frame.

Red Earthenware Jug, $4\frac{1}{2}$ inches high, with bright yellow glaze inside.

(8) By SAMUEL SMITH, St Alban's, Colinton.

Lock of Dr Thomas Chalmers's hair.

(9) By D. G. ANDERSON, 10 Murrayfield Place.

Bone Awl or Borer, 4 inches in length, found near a "Pict's House," Bay of Skaill, Orkney.

¹ *Proceedings*, vol. iv. p. 383.

- (10) Bequeathed by Sergeant-Major JAMES MACMILLAN, Royal Artillery, formerly an Attendant in the Museum.

Four medals awarded to the Testator:—

Indian Mutiny, with bars for Central India and Lucknow.
Long Service and Good Conduct.
Long Service in the Volunteer Force.
Meritorious Services.

- (11) By G. DEANS RITCHIE, Chapelgill, Broughton.

Leaf-shaped Arrow-head of Radiolarian Chert, $1\frac{1}{4}$ inch by $\frac{7}{8}$ inch, found near Dolphinton.

- (12) By Rev. W. A. STARK, F.S.A.Scot., Senior Minister of Kirkpatrick-Durham.

Wooden Spunk-box in the form of a barrel, the initials "R.I." (Robert Innes) cut on the bottom. The box was turned on a lathe by the Buchanites when they lived at Newhouse, Kirkpatrick-Durham, after the death of Mother Buchan in 1791.

- (13) By JOHN MORRISON, Galson, Borne, Isle of Lewis.

Collection from a kitchen-midden near Galson (see also *Proceedings*, vol. lvi. p. 200), consisting of portion of a Small-toothed Comb of Bone, $1\frac{1}{8}$ inch by $\frac{7}{8}$ inch, ornamented with dot and circle designs; three Bone Pins, $2\frac{9}{16}$ inches, $2\frac{1}{2}$ inches, and $2\frac{1}{4}$ inches in length; fragment of a Deer-horn Object, $2\frac{1}{16}$ inches in length, 1 inch in greatest breadth hollowed longitudinally, large perforations near thick end, cut at the other, point wanting; three Deer-horn Tines, 6 inches, $4\frac{7}{8}$ inches, and $1\frac{1}{16}$ inch in length, sawn or cut at the thick end, the first gnawed at the point; extreme end of an antler, showing two small tines, $3\frac{1}{4}$ inches in greatest length, having cut marks; wall fragment of hand-made Pottery Vessel, with applied cable-like moulding and crossed double lines incised round the widest part. (A silver coin of Eadgar (957-975 A.D.) was found also.)

- (14) By JAMES S. RICHARDSON, F.S.A.Scot., Inspector of Ancient Monuments for Scotland.

Oval Pebble of Granite, $2\frac{1}{4}$ inches by $1\frac{1}{8}$ inch by $1\frac{1}{16}$ inch, partly perforated from both sides near one end; fragment of a Jet Armlet, $2\frac{1}{8}$ inches in length, split longitudinally, the circumference incised with oblique lines between single marginal lines; Rim portion of hand-made Pottery Vessel, of dark buff ware, with a row of applied circular projections outside and four transverse rows of twisted cord pattern inside; Globular Bead of yellow vitreous paste, $\frac{5}{16}$ inch in length; a Mass of

frothy Iron Slag covered with a layer of burnt clay of red and grey colour. All from Glenluce Sands, Wigtownshire.

(15) By D. Low, Losset, Alyth.

Three Bullet Moulds of Iron (1) $6\frac{5}{8}$ inches in length, one handle terminating in a screw, and the other in a circular disc; (2) $5\frac{1}{4}$ inches long; (3) $4\frac{1}{8}$ inches long; all for a single bullet; and

Bullet Mould of Brass, $9\frac{1}{2}$ inches by $\frac{7}{8}$ inch by $\frac{9}{16}$ inch, having two rows of sixteen matrices in each row. All from Alyth, Perthshire.

(16) By JAMES CLARKE, Headmaster, St Leonard's School, Edinburgh, through WILLIAM KIRKNESS, F.S.A. Scot.

Fringe Loom, from Falkland, Fife, date about 1790.

(17) By WILLIAM KIRKNESS, F.S.A. Scot.

Hank of 2-ply Handspun Knitting Wool, length 200 yards, weight 43 grains (about $\frac{1}{10}$ th ounce), spun from Shetland native sheep wool, in Unst, Shetland, and awarded first prize at Baltasound Show, August 1921.

Bellarmino or "Greybeard" of brown mottled ware, with bearded face and rosette in front, height $8\frac{5}{8}$ inches.

Jug of Cream-coloured Stoneware, with human figures in panels on the sides, handle broken, height 5 inches. Both from Orkney.

(18) By ANDREW McCORMICK, F.S.A. Scot.

Three Discs, one $1\frac{1}{4}$ inch and two $1\frac{1}{8}$ inch in diameter, and fragment of a Ring, $1\frac{1}{8}$ inch in length, partially made, of Shale, from the churchyard, Portpatrick, Wigtownshire.

(19) By ALFRED R. DAVIDSON, F.S.A. Scot.

Three Communion Tokens, Abernethy-on-Tay: United Associate Congregation, 1748 and 1832; Parish Church, 1863.

(20) By Major and Mrs BROWN-LINDSAY of Wellwood.

Massive late-Celtic Finger-ring of Bronze, $1\frac{5}{16}$ inch and $1\frac{3}{16}$ inch diameter (fig. 2), found under a stone near the edge of Wardlaw Cairn, Muirkirk, Ayrshire.



Fig. 2. Bronze Finger-ring from Muirkirk. (1.)

(21) By JOHN HAMILTON, F.S.A. Scot.

Scottish Pistol of Brass with heart-shaped butt, the maker's name, Jo. MITCHEL, engraved on top of breech.

(22) By JOHN GARDNER, Woodend, Houston.

Communion Token of Burntshields Relief Church (near Kilbarchan, Renfrewshire).

(23) By GEORGE BEVERIDGE of Vallay, North Uist.

Milking Hobble of Ox Hair, such as is still used while cows are being milked in the fields at Vallay.

(24) By The Right Hon. the EARL OF GALLOWAY.

Food-vessel Urn and Fragments of another, found in cists in a cairn at Drannadow, Minnigaff, Stewartry of Kirkcudbright (see subsequent communication by A. J. H. Edwards).

It was announced that the following objects had been purchased for the Museum:—

Beggar's Badge, lead, of Montrose, oval, NO 7/ MONTROSE/ BEGGING POOR, with a rose on a shield, and a pellet border round edge.

Beggar's Badge, lead, of Nigg, Kincardineshire, round, $1\frac{1}{16}$ inch diameter, P. NIGG/ D. G. MINR/ No 5 1725.

Socketed Bronze Axe, $3\frac{1}{16}$ inches long, found in the parish of Old Monkland, Lanarkshire.

Quarter Thistle Merk of James VI., found near Marlborough, Wilts.

Wrought-iron Toaster from Ceres, Fife.

Stone Axe, $3\frac{1}{16}$ inches by $1\frac{5}{8}$ inch, found on the farm of Boghall, parish of Glencorse, Midlothian.

Fig. 3. Enamelled Brooch from Bow Castle broch. (1.)



Finely patinated Brooch of Bronze in the form of a cock (fig. 3), $1\frac{1}{8}$ inch long, $\frac{1}{16}$ inch in height, with late-Celtic ornamentation, enamelled in red and yellow, found in Bow Castle broch near Bowland, Gala Water, Midlothian. Acquired through J. B. Mason, F.S.A. Scot.

The following Donations of Books, etc., to the Library were intimated:—

(1) By HIS MAJESTY'S GOVERNMENT.

Calendar of State Papers and Manuscripts, Venice. Vol. xxiii. 1632-1636. London, 1921.

Calendar of the Fine Rolls. Vol. vi. Edward III., 1347-1356. London, 1921.

Close Rolls of the Reign of Henry III., 1247-1251.

- (2) By CHARLES E. WHITELAW, F.S.A.Scot.

Il Museo Stibbert Catalogo delle Sale delle Armi Europee compilato da Alfredo Lensi. 2 vols.

- (3) By Dr J. MAXWELL WOOD, F.S.A.Scot.

The Gallovidian Annual, 1921.

- (4) By A. REID ANDERSON, F.S.A.Scot., the Compiler.

A Short Bibliography on Scottish History and Literature.

- (5) By Dr MARCEL BAUDOUIN, the Author.

La Préhistoire du Caducée. Paris, 1918.

- (6) By THE TRUSTEES OF THE BRITISH MUSEUM.

Early Stamped Bookbindings in the British Museum.

Catalogue of the Greek Coins of Arabia, Mesopotamia, and Persia.

By George Francis Hill, F.B.A.

Subject Index of the Modern Books acquired by the British Museum in the years 1916-1920.

- (7) By Dr W. E. COLLINGE, Keeper of the Yorkshire Museum.

A Catalogue of the Boynton Collection of Yorkshire Pottery presented to the Yorkshire Museum 1916 and 1920, together with notes on some of the Yorkshire Potteries and the Marks used by them. By A. Hurst, A.K.C., M.I.R.S.E.

- (8) By GEORGE T. FLOM, the Author.

Origin of the Place-Name Keswick.

South Scandinavian Rock-Tracings: A Survey of the Material and a brief account of Like Sculpturings in England and Scotland.

- (9) By THE GLASGOW ARCHÆOLOGICAL SOCIETY.

The Roman Fort at Balnuldry (Summerston, near Glasgow) on the Antonine Wall. By S. N. Miller, M.A.

- (10) By C. POYNTZ STEWART, F.S.A.Scot.

A Series of Articles on the Stewarts of Forthergill and Garth.

- (11) By J. MAITLAND THOMSON, LL.D., F.S.A.Scot., the Author.

The Public Records of Scotland (Rhind Lectures, 1911). Glasgow, 1922.

- (12) By JOHN A. STEWART, F.S.A.Scot., the Author.

The Armorial Gallery, Highlanders' Memorial Church, Glasgow, 1922.

16 PROCEEDINGS OF THE SOCIETY, DECEMBER 11, 1922.

(13) By Monsieur GEORGES CHENET, Le Claon, Meuse, the Author.
Anciennes Verreries d'Argonne. Paris, 1922.

(14) By THOMAS REID, M.A., F.S.A.Scot., the Author.
Lanimer Day, Lanark, 1570-1913, with Appendix, 1921.

(15) By JAMES URQUHART, F.S.A.Scot., the Author.
The Parerga of William Honyman Gillespie. Edinburgh, 1922.

(16) By A. FRANCIS STEUART, F.S.A.Scot.
The Place-Names of Lancashire. By Eilert Ekwall, Ph.D.

(17) By Messrs JOHN LANE, THE BODLEY HEAD, LIMITED, the
Publishers.
Hadrian's Wall. By Jessie Mothersole. London, 1922.

(18) By DONALD A. MACKENZIE, F.S.A.Scot., the Author.
Colour Symbolism. Reprint by the Folk-Lore Society.

(19) By Professor THOMAS H. BRYCE, M.D., F.R.S., F.S.A.Scot., the
Author.
William Hunter and His Museum.

(20) By WILLIAM HARVEY, F.S.A.Scot., the Author.
The Ancient Scottish Craft and the Third Degree. Dundee, 1922.
Pamphlet.

(21) By VICTOR T. HODGSON, F.S.A.Scot.
Everyday Life in the Old Stone Age.
Everyday Life in the Neolithic, Bronze, and Iron Age.
Both by Marjorie and C. H. B. Quennell.

(22) By DAVID C. MACKIE, F.S.A.Scot.
Enrolment form of Walter Anderson, painter, in the Elgin Corps of
Volunteers, dated 3rd August 1807.

(23) By ALEXANDER ARNOT, Viewforth, Inverkeithing.
Burgess Ticket of Culross, in favour of Henry Arnot of Inverkeithing
(great-grandfather of the donor), dated 29th April 1791, with seal attached.

It was announced that the following books had been purchased for
the Library:—

Parliamentary Debates, House of Lords, Wednesday, 17th May 1922.
Vol. I., No. 37. Official Report (Unrevised).

- * Dictionnaire d'Archéologie Chrétienne. Cabrol. Tome 5.
 - Old Scottish Clockmakers from 1453 to 1850. By John Smith. Edinburgh, 1921.
 - Scottish Colonial Schemes, 1620-1686. By George P. Insh, M.A., D.Litt. Glasgow, 1922.
 - Ireland in Pre-Celtic Times. By R. A. S. Macalister, Litt.D., F.S.A. London, 1921.
 - An Inventory of the Historical Monuments in Essex. 2 vols. 1916, 1921.
- The following Communications were read:—

I.

TWO CELTIC CROSSES FROM THE MACHARS, WIGTOWNSHIRE.

By REV. R. S. G. ANDERSON, B.D., F.S.A.Scot.

Recently I heard of a sculptured stone lying at the garden gate of the farm of Brighouse, about three miles north of Whithorn, on the Whithorn-Wigtown road. This proved to be a portion of a cross-slab (fig. 1), measuring 21 inches in length, and 10½ inches at its widest, and retaining on it the head of the cross and a small fragment of the decorated shaft.

Over thirty years ago this cross-slab was turned up by the ploughman in a rough field on the Brighouse side of the service road from Castle Wigg, near its junction with the Whithorn road. It was found about a hundred yards to the left of the field gate, and a few yards north-west of the first rocky knoll. The cross-slab is of Silurian sandstone of a uniform thickness of 4 inches, undressed on the back but smoothed on the face. There is some doubt as to the stone having been artificially shaped. The sculptor has possibly selected the most suitable slab he could find lying to hand. It is peaked at the top, with smooth square edges on the left-hand side, but the right-hand side is more irregular and has also suffered from the plough.



Fig. 1. Cross-slab from Brighouse.

The designs on the slab have been worked with a minimum of labour. The head represents a Celtic cross of the disc-headed Whithorn type. In

this case the cross-head has been achieved by the simple cutting in of five rings, 3 inches in diameter, the centre of each ring being left as a plain disc. The two upper rings are joined together, as are also the lower two, by a curved line, thus forming the vertical arms of the cross. The horizontal arms reaching the edges of the stone are not further defined. The fifth ring marks the centre of the cross.

Immediately beneath the head, separated by a band $\frac{3}{8}$ inch in breadth, is a sunk panel containing an exceedingly simple form of ornament in high relief. From the fragment remaining it is difficult to say definitely whether the design is of a single strand interlacing, or of a grouping of four loops or sub-ovals, each about $4\frac{1}{2}$ inches long by 2 inches broad, so inclined to each other as to fill the breadth of the panel, and meeting centrally. The latter seems more probable, as there is no sign of any attempt to give the effect of one line passing over another. Between the angles formed by the inclined loops, a pellet 1 inch in diameter is inserted. The motif would possibly be repeated downwards on the shaft.



Fig. 2. Cross-slab from Elrig.

This cross has quite a character of its own, and is not a duplicate of any other yet found. But while differing as an individual, all its details clearly and strikingly connect it with its family type.

There is no record of any chapel or graveyard at Brighthouse. On the rocky knoll near where the cross-slab was found there seem to be traces of foundations, but they are not oriented due east and west.

I am much indebted to Mr Brown, of Brighthouse, who had preserved the cross-slab, and gave me the details of its discovery, as well as allowing me to take possession of the stone. Negotiations are at present under way to have it placed beside the other crosses of the district in the Whithorn Museum.

While writing the above note I learned of another Celtic cross-slab. This stone (fig. 2) was discovered over twenty years ago on the farm of Elrig, in the parish of Mochrum; but the exact spot or field cannot now be ascertained. Shortly after its discovery it passed into the hands of the late Dr Selby of Portwilliam, and is now preserved by his son and successor, to whom I am indebted for my knowledge of it, and for permission to photograph and describe it.

* This fragment is $14\frac{1}{2}$ inches long, $8\frac{3}{4}$ inches at its extreme width, and 2 inches thick. It is much weathered, and most of the shaft has disappeared. As in the case of the former cross, the back is undressed.

The design on the face, in a manner similar to that on the back of the cross-slab at Corsewall House,¹ is divided into three unequal panels. The cross in the topmost panel is equal-armed, of Maltese form, but with circular hollows at the points of intersection. These circular depressions open out widely on to the edges of the stone, and their borders continue into the cable design that frames at least the two upper panels. The interior surface of the cross is sunk and filled with decoration in high relief. In the centre, instead of the simple large boss or circular depression so frequent in the Galloway crosses, there has been introduced a Latin cross, hollowed out, and with a pellet or small boss within at the centre of intersection of the arms. Between this central cross and the outer border the space is filled with a single-stranded cord, twisted in the expanding arms into a loose, conventional simple knot.

Beneath the cross-head is a narrow, oblong, horizontal panel, filled with four rows of the key pattern. The drawing is slovenly, and the execution careless. On the third key of the topmost line there is what might be a small linear Latin cross superimposed, if it is not a mere eccentricity of the sculptor in a most eccentrically worked line. That it may have been intentional is suggested by the fact that on the corresponding panel, otherwise blank, of the Corsewall House cross-slab there is incised a similar cross. The key pattern is not found on many of the Galloway crosses, and none has it so elaborately or so prominently worked into the design as this Elrig Cross.

Below the key pattern is a border of cable design which meets a similar border that probably extended to the bottom of the vertical panel below. This panel, it is evident from the small fragment remaining, was filled with a single-cord plait or interlacing.

¹ *Inventory of Ancient Monuments, Wigtownshire*, No. 78, fig. 29.

II.

STONE CIRCLES AT RAEDYKES, NEAR STONEHAVEN, KINCARDINESHIRE. BY JAMES RITCHIE, F.E.I.S., CORRESPONDING MEMBER.

Raedykes is well known for its Roman Camp, a full description of which, with accompanying plans, is given by Dr George Macdonald in vol. I. of the *Proceedings of the Society of Antiquaries of Scotland*. The first map illustrating that paper is a rough sketch of the country round Raedykes as it appeared about 1784, and on it the site of a stone circle is marked, a short distance beyond the north-west corner of the camp. The second map is an improved edition of the first one, and on it also the circle marked and is named "Druid Temple" (fig. 1). It shows a single circle apparently formed of two concentric rings of standing stones, with no other circles in the neighbourhood. But this is not correct, for there are really four circles or ring-cairns on the site. The original map-maker, who was chiefly concerned with the Roman Camp, apparently did not consider the circles of sufficient interest to trouble about marking them in detail, and was content simply to indicate the site.

The circles are situated near each other, on the flat ground forming the top of the Saddle Hill, within a quarter of a mile of the farm-house of West Raedykes (fig. 2), and about 4 miles from Stonehaven. To reach them the visitor should proceed along the way to Banchory known as the Slug Road, leading north-west from the town past the policies of Ury House, till he reaches the third milestone. Fifty yards beyond the milestone a branch road strikes up the brae to the north. Fully 100 yards up the brae the road divides into two branches, the one on the right hand leading direct to the farm of Broomhill on the east side of the Roman Camp. If the visitor wishes to inspect the circles before visiting the camp, he should proceed along the Broomhill road for nearly a quarter of a mile, till he reaches the first branch turning off to the left. This is a rough farm road which passes a little to the south of the farm buildings on the hillside, and then along the west side of the camp till it ends at the farm of West Raedykes. Then a short walk through the heather, up the slope behind the farm-steading, brings the circles into view.

The four circles are situated within a short distance of each other, so that a line joining their centres would form a slight curve little more than a hundred yards in length. They are nearly equal in size, and each consists of a ring-shaped cairn with a hollow centre, the interior depression and the exterior circumference being bounded by a setting of

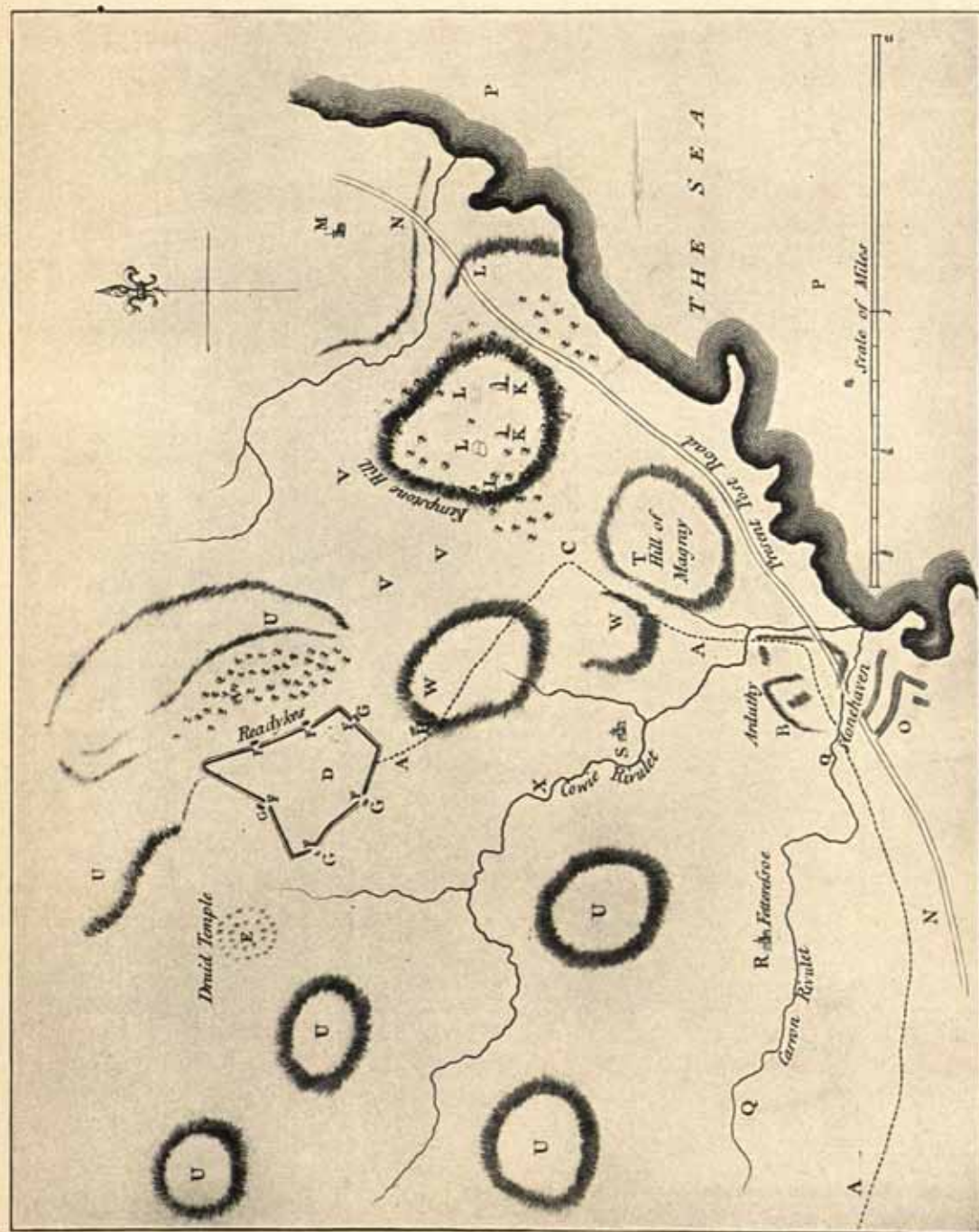


Fig. 1. Map of the Raedykes District, from the *Bibliotheca Topographica Britannica*, No. xxxvi.

earthfast stones, set upright to support the smaller loose stones of which the cairns are composed. Only two of these ring-cairns, the most

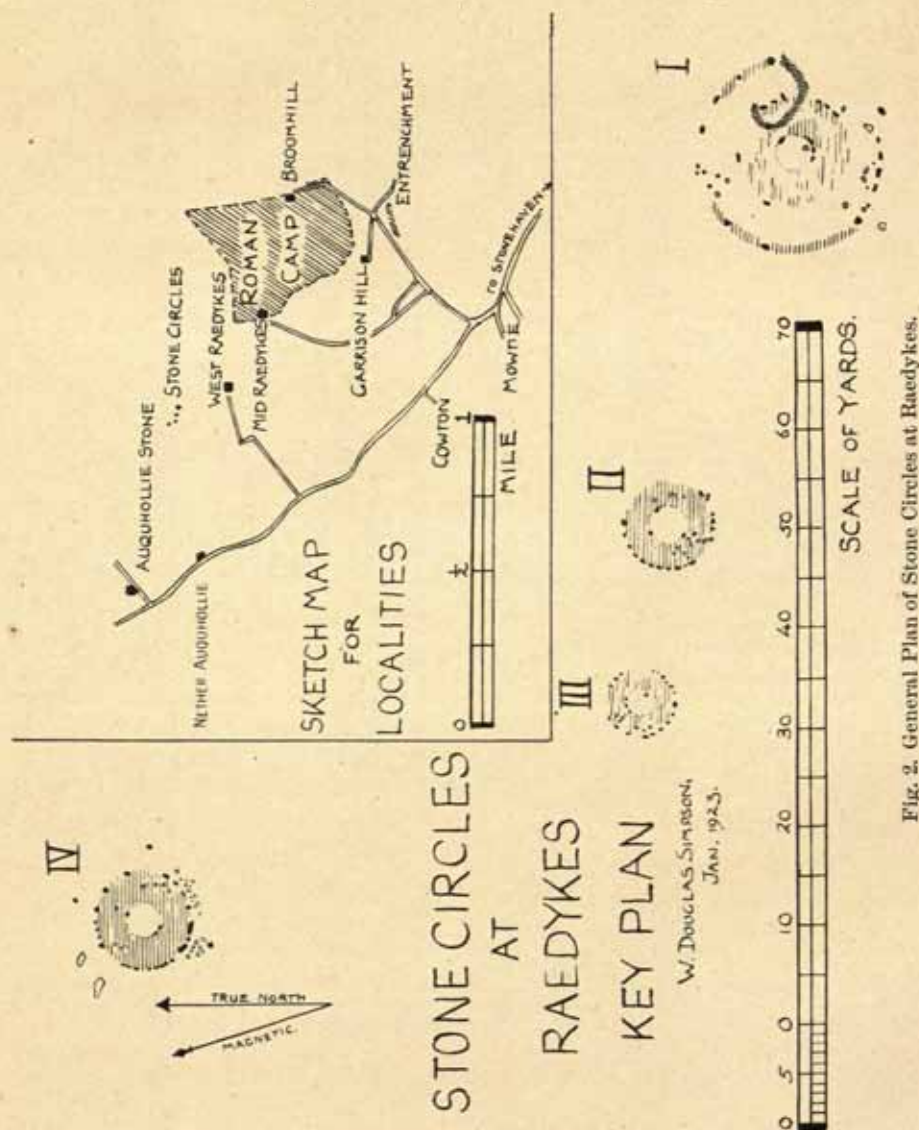


Fig. 2. General Plan of Stone Circles at Raedykes.

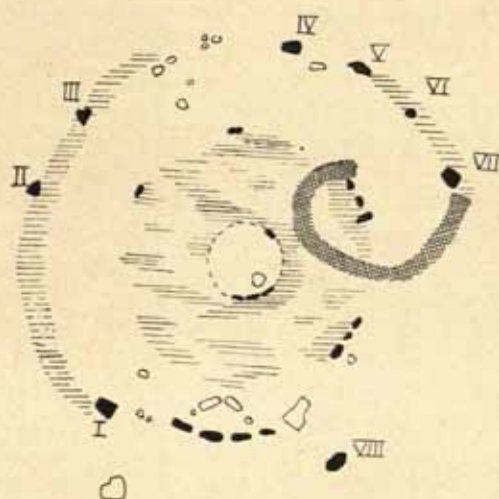
northerly and the most southerly, are surrounded by standing stones, and each is furnished with a circle of upright stones placed at a distance of a few feet beyond the outer circumference of the cairn. The recumbent stone, so important a feature in the Aberdeenshire type of circle, is

entirely absent, and there are no outlying pillar stones similar to those found in Cornwall and Devon and also at a few of the Aberdeenshire circles, such as those at Balquhain and Druidstown.

For the sake of distinguishing the circles from each other, they are numbered in the order in which they would be approached by a visitor proceeding from the farm-steading of West Raedykes, that is from the south-east.

No. 1.—This is the southern circle nearest to the farm of West Raedykes (figs. 2 and 3). It consists of a central ring-cairn surrounded by a circle of standing stones. The hollow in the centre of the cairn has a diameter of between 9 and 10 feet, and is bounded by upright earthfast stones averaging 2 feet in height. The ring of the cairn measures about 12 feet across from the central hollow to the outer circumference, which is formed of a ring of upright stones similar to those at its inner circumference. The cairn is very imperfect, many of its stones having been taken away to build a circular sheepfold near by, which is now somewhat dilapidated and apparently disused. About 18 feet of the outer stone setting on the south side of the cairn is in fairly good condition, being about $2\frac{1}{2}$ feet high, and having three stones in the centre rather larger than the others. The cairn was originally surrounded by a circle of standing stones placed at a distance of about 12 feet from it, making the diameter of the circle approximately 60 feet, but many of these stones have now disappeared. Only eight are at present standing, four of these on the east side being neighbouring stones in their original positions. As they are placed about 10 feet from each other, measured from centre to centre of each stone, this would indicate that the circle when complete consisted of some eighteen or nineteen upright pillars. These standing stones, however, are of small size, being only from 3 to 4 feet in height, and they seem at one time to have been connected by a dyke of small stones, portions of which still remain. Traces of a similar dyke, connecting the upright standing stones, were found during the excavations at the Garrol Wood Circle described in the *Proceedings of the Society*, vol. xxxix. p. 199, but it is very doubtful if in either case the connecting dyke formed part of the original structure. Just outside the circle of standing stones there are one or two blocks of stone lying prostrate among the heather. These may be the remains of a second circle of standing stones which has now disappeared, but which seems to be indicated on Barclay's map (fig. 1), or, as seems more probable, they may be simply stones which have been displaced from the existing circle or cairn.

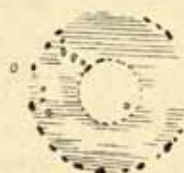
No. 2.—This ring-cairn is situated 25 yards north-west of No. 1, the circle just described (figs. 2 and 3). Its central hollow and outer circumference



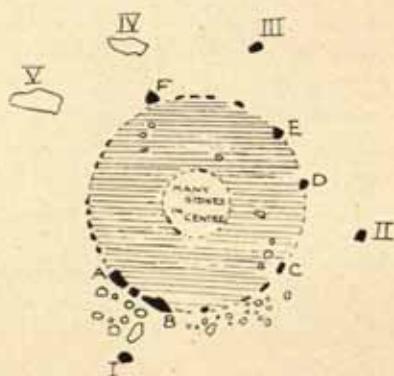
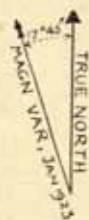
CIRCLE NO. 1



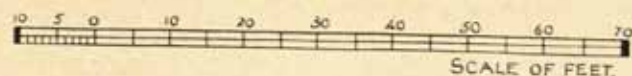
CIRCLE NO. 2



CIRCLE NO. 3



CIRCLE NO. 4



STONE CIRCLES AT RAEDYKES, KINCARDINESHIRE

W. DOUGLAS SIMPSON.

- ▲ EARTH-FAST STONES
- STONES FALLEN OR DISPLACED
- ▨ CAIRN STRUCTURE
- ▤ MODERN DRYSTONE WALL

Fig. 3. Plans of individual Stone Circles at Raedykes.

have been bound in by low walls of earthfast stones standing on edge, but many of these have become displaced or have been removed, so that it is almost impossible to give exact measurements, and those given here are only approximate. The central hollow of the cairn has a diameter of 8 or 9 feet, and, as the ring itself is about 10 feet in breadth, the diameter of the whole structure is from 25 to 30 feet. The heap of loose stones of which the mass of the cairn is composed, rises to a height of about 3 feet above the level of the surrounding soil. No circle of standing stones now surrounds the cairn, and there is no trace of any such circle ever having existed.

No. 3.—Ten yards north-west of No. 2 is another ring-cairn (figs. 2 and 3). It is similar in appearance to that already described, but not quite so large. The central hollow has a diameter of 8 feet, while the ring itself is only about 6 or 7 feet in breadth, making the total diameter of the cairn just a little over 20 feet. It also rises to a height of 3 feet above the surrounding surface. The material of which the cairn is composed is completely hidden by a thick growth of coarse grass and whins, as are also the boundary stones, so that this cairn appears less clearly defined than any of the others. The cairn is not now surrounded by any circle of standing stones, and there are no signs of any such circle ever having been attached to it.

No. 4.—This, the most northerly circle, stands about 50 yards to the north of that last described (figs. 2 and 3). It is a ring-cairn surrounded by a circle of upright standing stones, and thus it resembles the circle first described more closely than it does the others. The stones, however, are larger, and the circle, when in its original condition, must have been the most striking one of the group, though it did not differ from the others in size to any great extent. The central hollow of the cairn is 8 feet in diameter, and is enclosed by a ring of upright stones about 2 feet high set close together so as to form both a boundary and a support for the loose stones of the cairn. The ring of the cairn is 12 feet in breadth, and rises to a height of fully 3 feet above the level surface of the surrounding moor. The outer boundary of the cairn consists of a stone setting about 2 feet high, but it also contains several pillar stones of a much greater size, considerably larger than those found in the stone setting of any of the other cairns. Six of these stones remain in an upright position, but the largest two are on the south-west side (fig. 4). The tallest one measures 5 feet 6 inches in height, 3 feet 2 inches in breadth, and 1 foot in thickness. Its neighbour on the south side is 3 feet 10 inches high, 4 feet broad, and 1 foot 2 inches thick at the middle of the stone, tapering off to a narrow edge at each side. The distance between the centres of these two neighbouring stones is 7 feet. When

the structure was complete the ring-cairn was surrounded by a circle of standing stones, placed at a distance of 7 feet 6 inches beyond its outer ring, and forming a circle having a diameter of 16 yards, and a circumference of about 50 yards. Only three of these standing stones now remain in position; two others, having fallen over, lie flat beside their original sites, and fragments of several others lie scattered near. The tallest of the stones still standing is on the south-west side, near the two large stones of the outer stone setting already described. It is 4 feet 6 inches in height, 1 foot 6 inches in breadth, and 1 foot in thickness. The two fallen pillar stones lie on the northern arc of



Fig. 4. Raedykes northern Stone Circle showing Inner Stone Setting and Standing Stones from north-east.

the circle. The larger of the two, the west one, is 6 feet long, and its neighbour is 5 feet. Allowing for the portion of the base which was originally embedded in the soil, these stones when erect would closely resemble, both in height and general appearance, that still standing erect on the south-west. Since these are neighbouring stones, and they are 9 feet apart, the circle when complete may have consisted of sixteen or seventeen stones and have been in appearance almost a duplicate of the southern circle No. 1.

From their nearness to each other as well as from their similarity in size and construction, these circles form a remarkable group of ancient monuments. The ring-cairn is common to them all, but in two cases it is surrounded by a circle of standing stones. Ring-cairns surrounded

by circles of standing stones occur at Rees o' Clune, Durris, and Whitehill, Monymusk, but each of these has also a recumbent stone, a feature which is absent at Raedykes. A large proportion of the stones which formed the ring-cairn at the southern circle near Raedykes have been removed to make a sheepfold. Had this process been continued till all the loose stones of the cairn had disappeared, the remaining



Fig. 5. Ogam-inscribed Stone at Auquhollic.

earthfast blocks, which at present form the inner and outer boundaries of the ring-cairn, would have presented exactly the appearance of those stone settings which exist in many of the Aberdeenshire circles. This suggests the idea that in many cases these stone settings may be the sole remains of ring-cairns, which once occupied the interior of the circles, the loose stones having long since been removed for utilitarian purposes, such as road making and dyke building.

The moorland to the north of the circles is dotted over with numerous small mounds which have all the appearance of tumuli, but no

systematic examination of any of them appears to have been made. The circles also seem to have escaped examination, and though several urns have been found in the neighbourhood of the Roman Camp, none so far are recorded as having been discovered at the circles while stones were being removed from the interior cairns. The numerous standing stones which have disappeared have in all likelihood been used for building purposes at the neighbouring farm-steading.

On the low ground at the foot of the hill on the west side, and about a mile from the circles, another object of antiquarian interest is to be seen. It is a tall, upright pillar standing at the side of the road near the farm of Auquhollie, and hence known as the Auquhollie Stone (fig. 5). It is 8 feet 6 inches high, 2 feet wide, and 1 foot 6 inches thick at the base, tapering slightly to 1 foot 2 inches at the top. Its chief interest centres in the Ogam inscription which is incised on its southern side, the edge of the stone being used instead of a stem line, in a manner similar to that shown on the well-known Newton Stone, near Inch. The Ogam strokes, especially those at the beginning and end of the inscription, are somewhat indistinct, so that it is difficult to get a satisfactory reading of the lettering. The Auquhollie Stone is described in *Early Christian Monuments*, pp. 203-4.

To Mr W. Douglas Simpson, M.A., F.S.A.Scot., I wish to record my great indebtedness for the valuable plans of the circles, specially prepared by him to accompany this paper.

III.

THE DEVELOPMENT OF CAERLAVEROCK CASTLE. BY G. P. H.
WATSON, F.S.A. SCOT., SECRETARY.

Caerlaverock Castle, which stands in a swamp on the Solway flats about nine miles south-south-east of Dumfries, must be reckoned among the foremost examples of secular architecture in Scotland. The site is naturally secured by its marshy surroundings, but immediately to the north rises firmer ground, and a spur of this declining into the marsh has been adapted for the castle by insulating and protecting it with a system of ramparts and ditches; the inner ditch formerly spanned by a drawbridge is full of water, 10 feet deep in parts; the outer ditch, swampy and difficult of passage, was probably crossed on a traverse controlled by a gate or other forework; the entire system of outworks was commanded from the defensive wallheads of the castle.

The ramparts seem to be mainly of sand; the subsoil of the site is clay, and the distribution of rock and hard foundation upon it may have dictated the extent and general arrangement of the structures. The castle is illustrated in an interesting MS. military report prepared between 1563 and 1566 by an English official and now preserved in the Cottonian Collection, British Museum; the report is reproduced in the *History of Liddesdale and the Debateable Land*, App. LXX. p. CIX., from which the undernoted extract relative to Caerlaverock is taken.

"The mouthe of the Water of Nytht: A schallow revare; noo weshalles can come furtht of Englonde in yt but at the ful sea, and that at the crope of the tyde; soo that thei mon pas the Longrake sande, in the myddes of Sulwaye: And yf thei come from Wirkingtoun or that coest, thei mon come upoun Gallowaye syde on the same maner. There boates and vesshells can not excede ten townes, soo any interprise in that revare to be attempted by watter, ys to small purpose, oneles the cuntrie wor ones wyn, and some fortification in the same, and in that caise bootes may arryve as occacion served, witth vittell and other necessariis, from Holme lordshippe and that coest, being ten myles over by watter.

"Half a myle from the watter mowtht of Nytht, and upoun theast syde of the same, standitth the castell of Carlaverok, pertenying to the Lorde Maxwell: Noo house presentlie to be kept from cannon or battarde, nor yet can be made strong, as the platt thereof hereafter presentlie will shew, onles the hill above the same, called the Warde Law, be fortified; bootes as said ys of ten tonnes will come to the foote of this hill at the full sea, distant from Holme lordshippe in Englonde xj myles over Sulway watter. Shoulde Lorde Maxwell making a joyall of yt to schyft

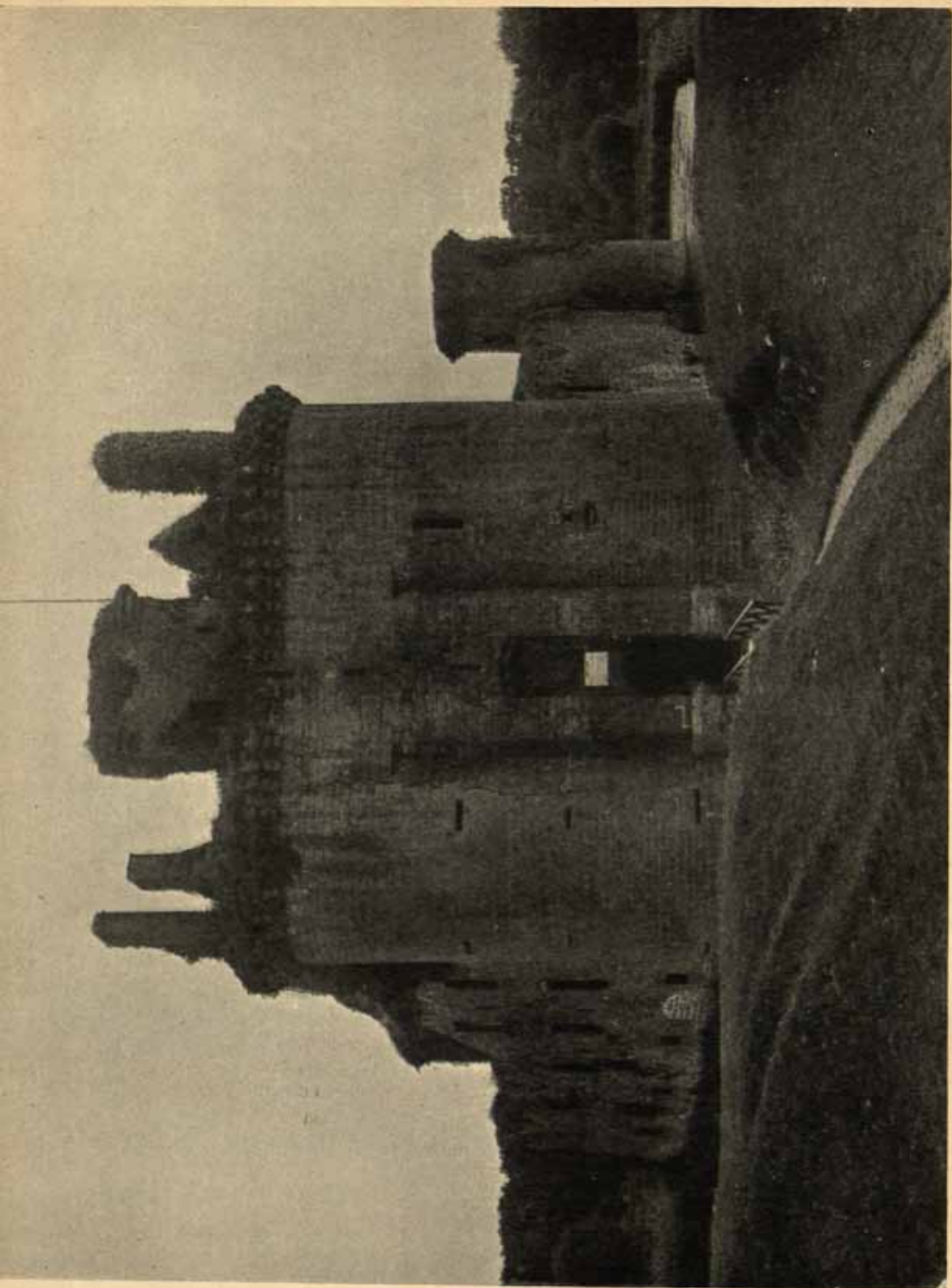


Fig. 1. Caerlaverock Castle : The Front.

him self furtht of Englonde after his apprehension, caused the same be delyvered in Yngles possession; and for vittaling thereof, Henry theight of eterne memorye sent to aide my Lorde Wharton, capitane Camboo, witht a thowsande hargabusers, spanzeondes, and foure hundreitht clavyos horsmen, whiche tuik noo effect, the howse being rendred up or aide camme, and as noo strenght tenable."

The Ward Law, rising to a height of 313 feet over sea-level, overlooks the castle, from which it lies northward and about a mile distant. On the summit is a prehistoric earthwork.

On plan the castle is a triangle disposed with the apex to the north and the base to the sea; flanks and base are protected by curtains originally surmounted with a parapet walk, terminating at the angles in circled towers. There are single towers at the base, and twin towers at the apex, the latter fronting the gatehouse and flanking the entrance, which looks northward to the higher ground, where there was a large walled enclosure provided with an unusually large and lofty gate, still extant, opening to the north-east.

The front (fig. 1) is perhaps the most majestic of the quasi-military façades of Scotland. It comprises the gatehouse, the kernel of the castle, which bears detail rather similar to that on David's Tower in Edinburgh Castle, detail that can definitely be assigned to the late fourteenth or early fifteenth century. The gatehouse is a piecemeal construction. Messrs. MacGibbon and Ross have shown that the original entrance lies obscured, as will be seen from the plan, behind a forework built about the middle of the fifteenth century, at which time the parapet or bartizan was completed. The west tower had at first no gun-loops, and those which exist are obvious insertions; while the masonry of the east tower shows no sign of disturbance externally, internally there is evidence that the gun-loops in this tower also are secondary. The cap-house and superstructures are early sixteenth-century additions.

The east flank (fig. 2) comprises the east tower and gable of the gatehouse, beyond which the curtain, formerly much lower, has been largely rebuilt and finally embodied in a range of seventeenth-century building. It will be noticed that the south-east tower no longer survives. The bartizan is carried across the gable and is continued for a short distance southward on a screen of masonry, forming a protective wing to conceal the junction of gatehouse and curtain. There is little doubt that the vulnerable points of a structure were obvious to the mediæval soldier, and devices such as this were employed to render his deductions ineffectual.

The base curtain is demolished for the greater part of its length. The south-west tower, contemporary with the gatehouse, has four storeys,

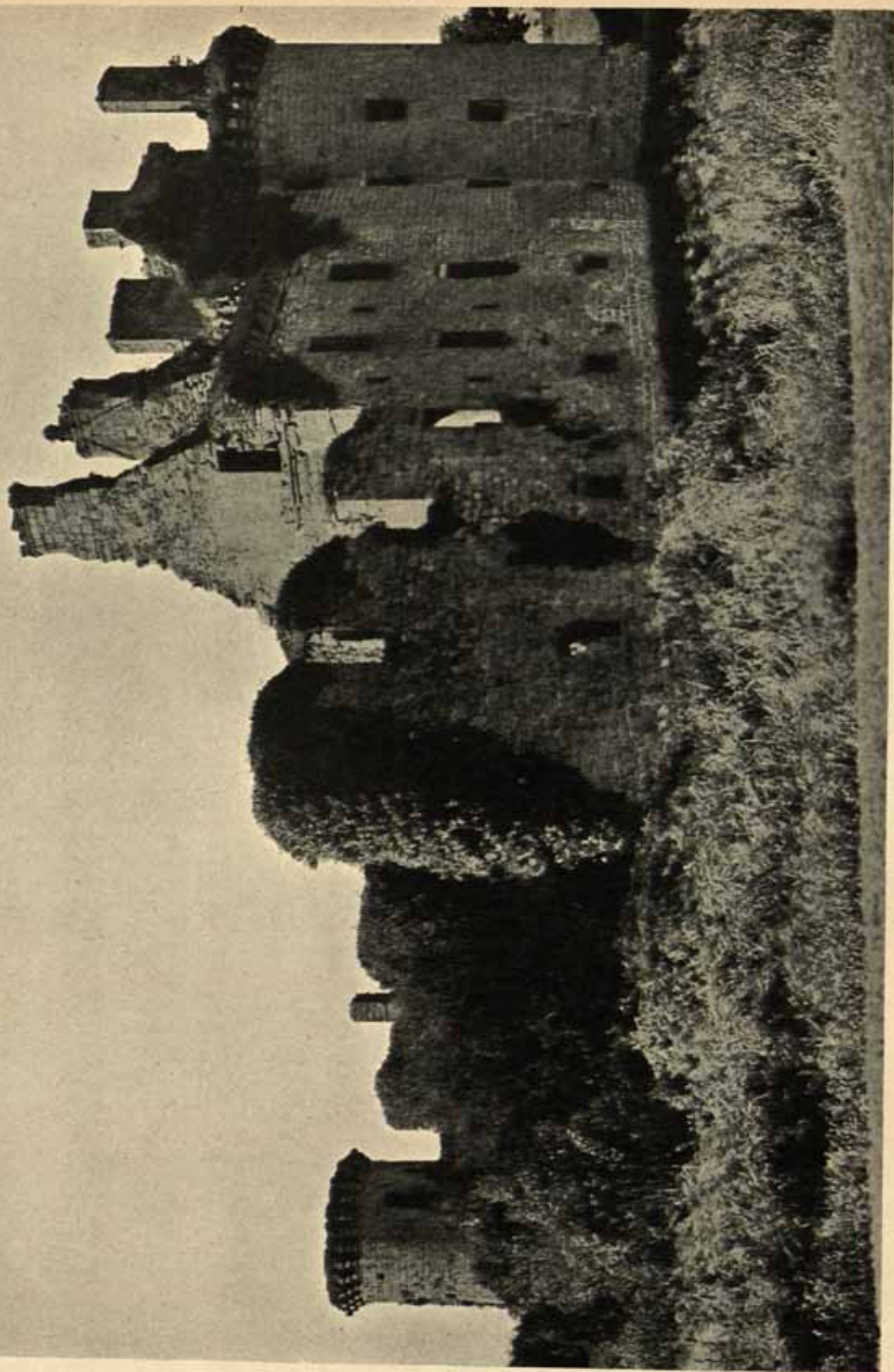


Fig. 2. Caerlaverock Castle : East Flank.

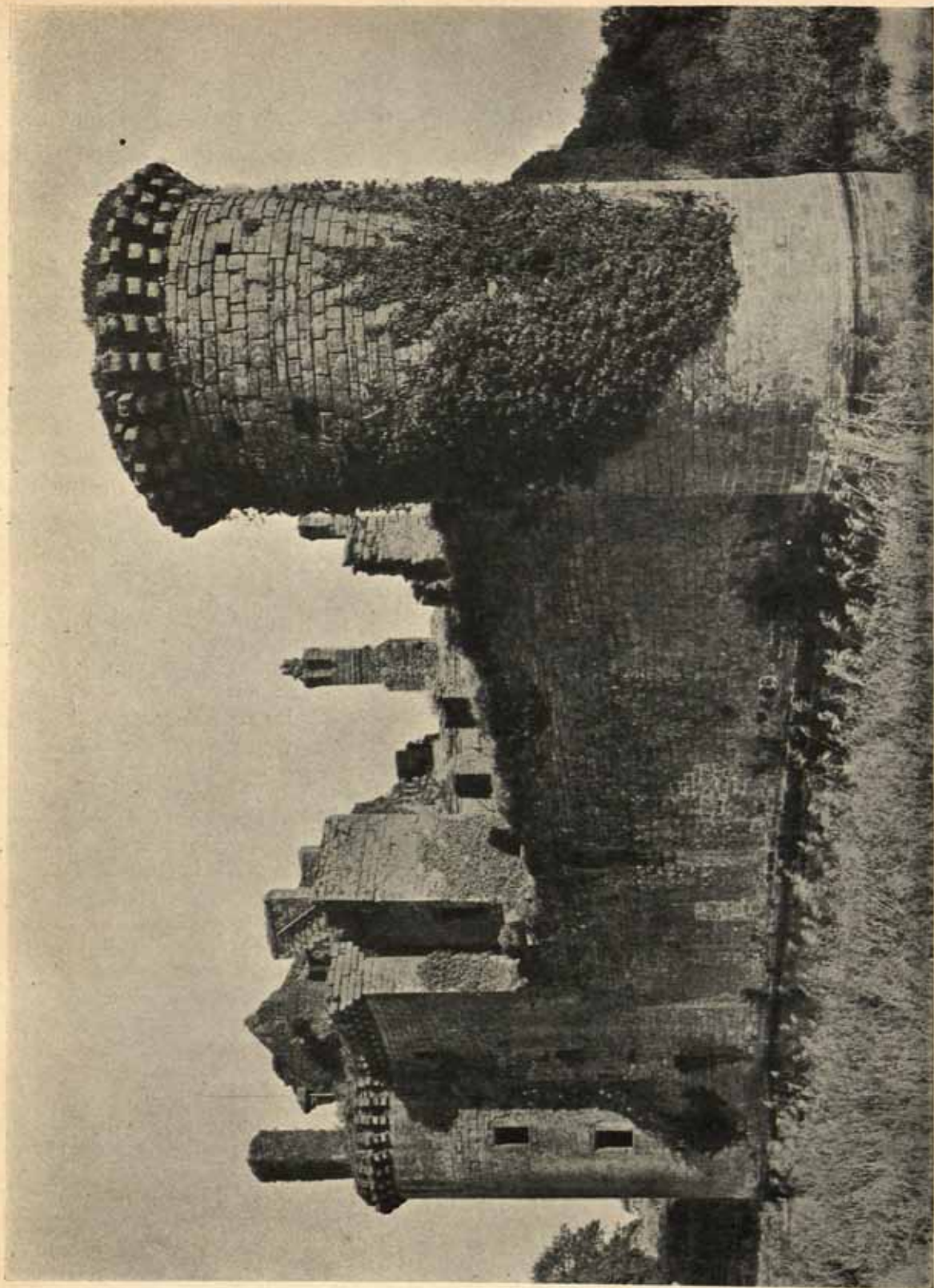


Fig. 3. Caerlaverock Castle: West Flank.

none being vaulted; the upper storeys were entered from the curtain walls, for there were no internal stairs. Filled up, but just distinguishable, are meurtrières formed in the window breasts. At the junction of the tower with the base curtain lay a door opening to the ditch, in which, at this place, there are 10 feet of water.

Within the interior, the rear of the gatehouse is seen partly obscured by a rear-work (c. 1500) supported on lofty piers. Against the west curtain is an early sixteenth-century wing, and just beyond it rises a stair tower of rather later date. Against the east curtain stands the latest addition, a seventeenth-century range which returned on the south along the base and incorporated the curtain.

The west flank (fig. 3) exhibits different types of masonry. In general, the masonry of the towers and wing is ashlar work, very finely wrought low in the course and very carefully jointed, but the upper part of the west curtain is curiously rough and was presumably built as an inner wall, a detail which, when considered in conjunction with the presence of tiers of putlog holes, leads to the inference that there was a two-storeyed hoard or balcony, obviously secondary, overhanging the ditch. Traces of similar hoards are found elsewhere in Scotland, for example, at Dunnottar Castle. Just beyond the flue of the parapet privy a vertical joint in the masonry runs from wallhead to base, and indicates that the base tower and some 3 feet of the adjoining curtain were constructed as a unit. The masonry at the north end of the curtain has apparently been spliced.

All fortifications run pretty much on stereotyped lines, and the gatehouse of Caerlaverock has its analogies. For example, the plan of the Porte de Laon at Coucy-le-Château, shown in fig. 4, is markedly similar, though that building is much larger and presumably a century and a half earlier than Caerlaverock. While there is this resemblance in the plans, the purpose of the structures is entirely different. The French example is technically a "chatelet,"¹ merely a fortified gate, in this instance on a town wall, simpler patterns of which are the "Bars" of

¹ Longtoft, speaking of the Caerlaverock Castle captured by Edward I. in 1300, described it as "povere chastelet," a poor little castle, but in France the term seems specific.

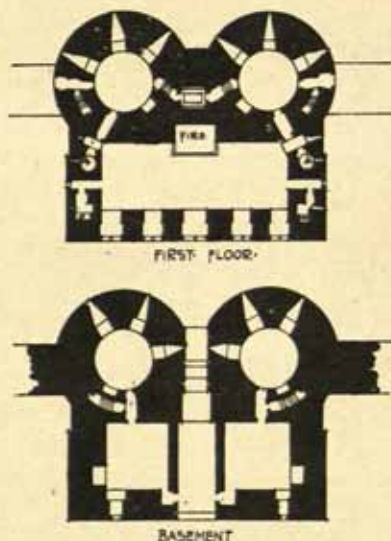


Fig. 4. Plans of Porte de Laon at Coucy-le-Château.

York and other English towns; Caerlaverock, however, was essentially a residence, a strong one certainly, of the type termed the "gatehouse castle," since the house is concentrated over the entry. Although a French example is cited here for comparison, that is not to say that this entry is peculiar to France and Scotland; on the contrary, a lengthy list might be given of gates both in England and in Wales very similarly arranged.

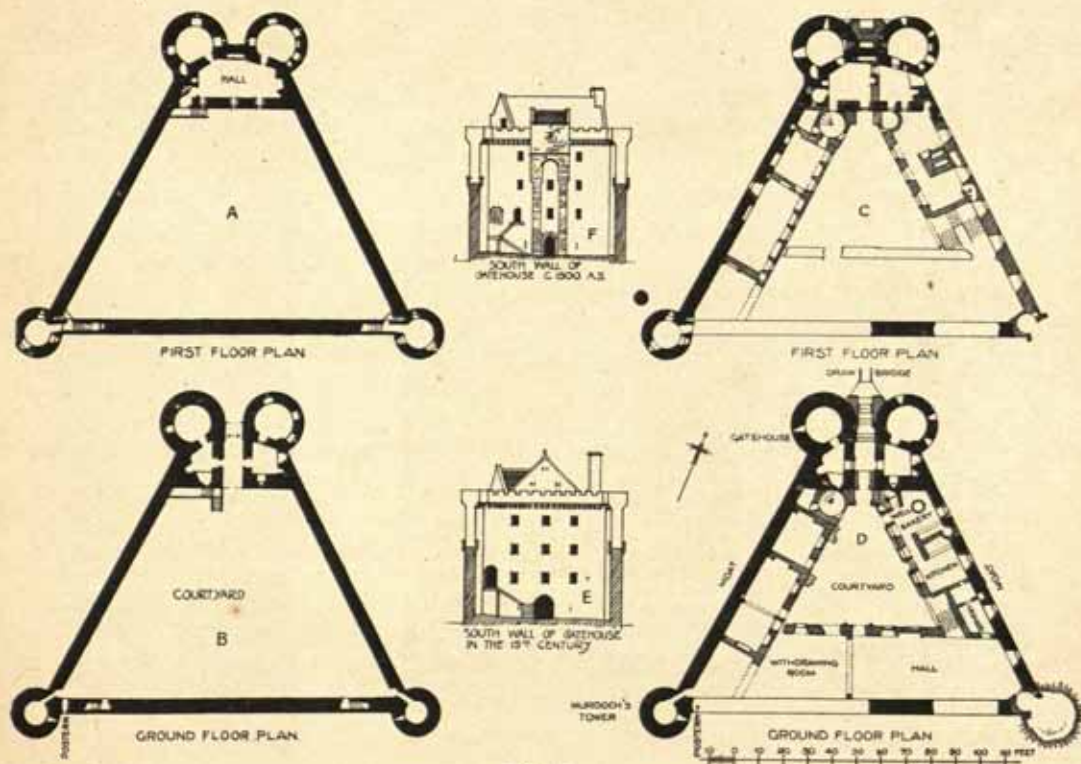


Fig. 5.

A B. Plans of Castle as originally built; C D. Plans of Castle showing additions; E F. Elevations of south wall of Gatehouse.

Caerlaverock in its earlier form (*cf.* plan, fig. 5) comprised a house of five storeys with a courtyard in rear enclosed by curtain walls less than three storeys in height, terminating at the base angles in four-storeyed towers. The house was complete in itself, for the base towers, to judge by the survivor, were intended primarily for defence and temporary shelter and not to provide additional dwelling accommodation. The entrance lay deeply recessed within the frontal towers, and the vaulted trance was protected first, by an opening that penetrates the wall

vertically and can only be a machicolation through which hot water, tar, or such like could be poured on assailants; the second defence was a portcullis, the third a gate. Sufficient barriers we might suppose, yet evidently inadequate in the opinion of the mediæval engineer, for we find in course of time that they were considerably augmented till they finally comprised, first, the drawbridge which folded up within a recess and completely covered the entrance; second, a gate which opened out and could only be opened when the drawbridge was lowered; third, a portcullis; fourth, a gate opening inward; fifth, another portcullis; sixth and seventh, the portcullis and gate first mentioned; eighth, a gate opening outwards (*i.e.* to the north); ninth, a similar gate; and tenth, a feature which is assumed to be a rear portcullis. The builders of Caerlaverock seem to have realised that the entrance to a castle was its vulnerable point. The three last-mentioned defences were intended to prevent access from the courtyard, a precaution not usually taken. It is of course most unlikely that all these barriers were in use at one time.

On either side of the trance lies a vaulted porters' room communicating with a cellar in the towers, once vaulted, though I agree with Messrs MacGibbon and Ross that the vaulting is secondary. I would go further and suggest that much of the existing vaulting is a renewal. As the basement was vaulted and there was no internal communication with the upper floors, the former might be taken without involving the fall of the whole; further, if the basement went on fire there was little danger of the conflagration spreading upward.

The first floor seems to have been originally entered towards the west end of the south wall, where a wide arched doorway is seen built up; it must have been reached by a forestair of timber (fig. 5, E),—and a precisely similar arrangement is found in a gate tower at Carcassone. When the turnpike behind this doorway was altered, a window adjoining was opened up to form a more convenient entrance which must also have been reached by a forestair (fig. 5, F).

The hall of the gatehouse occupied the body of the first floor, for the present mid-partition is sixteenth-century work, and there was an inner room in each of the towers; between the entrances to these lay a recess from which the portcullis was worked. The east gable has been rebuilt internally; it would contain a large fireplace probably with a mantel or hood. The upper floors, reached from the turnpike on the west, were similarly arranged. The towers have vaulted ceilings to the second floor; the western of these is ribbed, as will be seen from fig. 6. From the second floor upwards there is an additional chamber within the mid-fifteenth century forework, which in each case was devoted to defence and not to domestic purposes. The lowest chamber

has provision for the mechanism which worked the portcullis and drawbridge.

The first alteration on the castle of any importance was the projection of the entrance and the provision of additional barriers. A detail of the forework is given in fig. 7, which shows the recess A-A into which the drawbridge folded, the hole C for the cable which raised or lowered the bridge, two socket holes B-B for the ends of the timber stays from which the bridge depended, and the socket holes D for the bridge transom.



Fig. 6. Vaulted Ceilings, N.W. Tower.

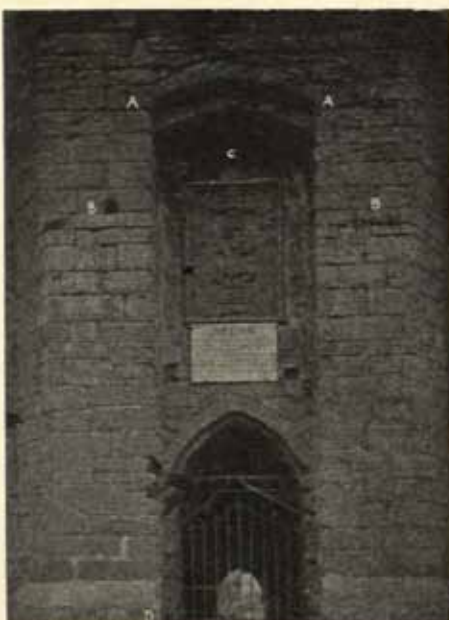


Fig. 7. Detail of Forework.

A seventeenth-century armorial panel has been inserted within the recess; the principal achievement is that of Robert Maxwell, first Earl of Nithsdale, while subsidiary shields at the corners bear respectively the Royal Arms, the arms of John, eighth Lord Maxwell, Earl of Morton, of Maxwell impaling Mar, and lastly of Stewart of Dalswinton. The back of the pend was subsequently contracted, and this alteration dates with the later entrance to the first floor, about the middle of the fifteenth century. The foregoing were entirely defensive additions; but in the same period a lodging was built against the west curtain. Its extent and appearance can only be conjectured, for it was demolished to make room for the present west wing in the sixteenth century.

About the beginning of the sixteenth century the cap-house, super-structures, and chimneys were added, and a curious lofty rear-work was built at the back of the pend. This is supported on high piers spanned by an arch surmounted by a little house (fig. 5, F). The soffit of the arch is slotted, and the corbelled ingoings are chased to permit some construction to slide up and down. The outer east face is similarly corbelled and chased, perhaps for counterweights. While the rear-work adds greatly to the charm of the courtyard, it affords useful abutment to the lofty south wall of the gatehouse. Some little time after it, the present handsome lodging was built against the west curtain, which is two storeys in height and comprises on each floor a succession of elegant chambers which we might call public rooms if there were mediæval precedent for the term. The fireplaces are particularly fine of their kind, each having shafted jambs and moulded capitals and bases beneath a massive lintel surmounted by a cornice. The windows to the courtyard are of good size, and those on the upper floor have had mullions and transoms. The only identification on this building is a skewput bearing a shield charged, a saltire for Maxwell. This range was clearly erected prior to the stair tower adjoining, for a very beautifully moulded doorpiece with slightly ogival head is obscured by the tower; the door must have opened to the stair which served the second entrance to the first floor of the gatehouse.

The stair tower was built within the sixteenth century to give easier access to the upper floors of gatehouse and west wing. The open area between it and the curtain was ingeniously utilised by flooring it to form little galleries or balconies beneath a penthouse roof. During the sixteenth century the windows of the gatehouse were enlarged, the mid-partition was built and a niche to hold a "dressoir" for the display of plate was formed at the dais end of the Hall. It was subsequently slapped out as a door to a later turnpike.

The final and largest addition was built by Robert Maxwell, the first Earl of Nithsdale, about 1638, apparently on the site of the late sixteenth-century structures. It is a building of three storeys beneath the wall-head, and the accommodation comprises to the south the "New Hall" with drawing-room off it, and, to the east, offices and the great staircase. On the upper floor a gallery, the "Long Hall," probably extended above the "New Hall," while the east wing contained, *en suite*, "my ladies Chamber and the dining-room." In addition to the main staircase which rose to the first floor only, leaving direct ascent to be continued by a rather mean little service turnpike, there are two handsome turnpikes at the north-eastern and south-western angles of the range, which served all floors in transit.



Fig. 8. Caerlaverock Castle: North angle of Courtyard.

The seventeenth-century fireplaces are very handsome and have moulded console-shaped jambs,—some of the gatehouse fireplaces have been renewed in this pattern. From the occurrence of the fleur-de-lys on the fireplace of the chamber next the main stair, the room has been identified by Mr W. M. Mackenzie, Secretary of the Royal Commission on Ancient Monuments, as "My Ladies Chamber." Elizabeth Beaumont, Countess of the first Earl of Nithsdale, bore three fleurs-de-lys on her shield.

The façade of Nithsdale's addition (fig. 8) is one of the most exquisite Renaissance compositions left to us. It is not in the stately articulated Renaissance of Palladio and his followers, but its appeal is perhaps more subtle. The composition is admirably handled and most happily grouped. The setting of the turnpike windows, which form a terminal to the façade, is particularly good, and the windows proclaim their purpose. Throughout, the architectural detail is most refined and dainty; the window architraves of the ground floor are moulded and fluted and those above are furnished with little shafts; the pediments contain heraldic and allegorical carvings of considerable interest and some æsthetic value.

The first castle of Caerlaverock which stood either on this site or on one adjacent¹ was, for the second time, razed in 1356.² Some little time after this destruction, between 1375 and 1410 to judge from the architectural details, the present castle was constructed; Fraser³ informs us that Sir Robert Maxwell (1373-1409) was the builder, and his statement is apparently correct. The present west range may have been built by John, fourth Lord Maxwell (1485-1513), but is more probably the work of Robert his successor (1513-1546). In 1593 John Carey reports to Lord Burghley that "Lord Maxwell makes great fortification and has many men working at his house 5 miles from Dumfries."⁴ While no indication is given of the nature of the work then being executed, the date would quite well suit sundry remnants spared by Robert Maxwell, Earl of Nithsdale, in erecting his new wings in the early seventeenth century.

I am indebted to H.M. Stationery Office for the loan of blocks of figs. 1, 2, 3 and 8.

¹ Cf. *Royal Commission on the Ancient and Historical Monuments of Scotland: Seventh Report and Inventory*, 33 (I. and II.).

² *Scotichronicon*, lib. xiv. cap. xv.

³ *Book of Caerlaverock*, i. pp. 119, 120.

⁴ *Calendar of Border Papers*, i. p. 470.

IV.

THE PIGMENTS USED IN PAINTING "THE ROSSLYN MISSAL" IN THE ADVOCATES' LIBRARY, AND THE CELTIC PSALTER, D. p. 111, 8, IN THE LIBRARY OF THE UNIVERSITY OF EDINBURGH. BY PRINCIPAL LAURIE, M.A., D.Sc., F.R.S.E., HERIOT-WATT COLLEGE.

Before describing the pigments used in painting these two illuminated manuscripts it is necessary to consider shortly the pigments used on early Byzantine and early Celtic manuscripts. The earliest Byzantine manuscript in the British Museum which is illuminated is supposed to be of the sixth or seventh century, and consists of two leaves from a Gospel which are entirely covered with gold-leaf paint (Add. 5111, pp. 10, 11, Brit. Mus.). The pigments with which this MS. is painted are ultramarine from lapis-lazuli, a green probably malachite mixed with a little blue, and a wonderful rich-coloured lake.

Two of these pigments require special consideration before we go further.

To deal first with the lake pigment. While it is incapable of proof, the probabilities are, judging from the tint, that this pigment has been prepared from the murex shell-fish from which the Tyrian purple was obtained. Pliny gives a recipe for the preparation of a pigment, and I do not know of any other dye which was known at this time and could give just this quality of colour and also be so permanent. A madder, the only other possible dye, if prepared by the old Egyptian recipe with lime and gypsum, gives a reddish-brown lake. Whether this be the murex colour on this particular parchment or no, there can be no question that on later MSS. lakes prepared from this dye were used as pigments; while in other cases, both in Byzantine and Carolingian and early European MSS., the whole parchment was dyed and the writing done with silver and gold letters.

The other pigment which requires special discussion at this stage is ultramarine. The preparation of ultramarine from lapis-lazuli is not an easy operation. If the lapis-lazuli is ground to a fine powder and stirred up with water and an attempt made to separate the ultramarine by floating, a very imperfect separation results, the ultramarine still containing particles of the colourless minerals present in the lapis-lazuli, and the outcome being a dull greyish blue.

Apart from the tint of a specimen of ultramarine painted out on vellum, examination under the microscope enables us at once to judge

of the success of its preparation, the poorly prepared specimens being largely composed of colourless minerals. The methods of preparation gradually improve through the centuries, but it is not till we come to the MS. of the monk Theophilus that we get a proper recipe for its preparation, and it is not till the end of the twelfth century that we find the MSS. adorned with a perfect and splendid ultramarine. The method of preparation finally devised and which we find repeated again and again with little variation in recipes for pigments, was to mix the finely ground lapis-lazuli with a mixture of resin, oil, and wax. Keep it for some days and then knead and work the lump of wax and resin under warm water with a very little wood ashes dissolved in it, when the ultramarine separates from the lump of resin and settles in the bottom of the basin. This method corresponds very closely to some of the modern methods of separating ores by means of emulsions of oil and soap. The improvement in its preparation was very gradual, and can be traced century by century in European MSS.—Italian, French, and English; but the Byzantine monks refused to alter their methods, and the same dull imperfectly prepared ultramarine is to be found on MSS. of the thirteenth century.

Besides ultramarine and the Tyrian purple we find—orpiment for yellow, vermilion for red, and malachite, or sometimes a dull earthy green difficult to identify, for green. Let us now leave the Byzantine MSS. and examine the earliest of our Celtic illuminated MSS., the Lindisfarne Gospels of the eighth century.

The story of these Gospels and the way in which they came to be preserved through the centuries is so well known as to require no repetition here. We are interested for the time being in the pigments used to produce these gorgeous decorations. The pigments have been laid on with a gum of some kind that has produced a very shiny surface. It would be of great interest to know what this medium was, as the excellent preservation of the painted surface is due to its free use by the illuminator. It might be white of egg, cherry-tree gum, gum arabic, gum tragacanth, or some blending and mixing of these. The shiny surface makes it somewhat difficult to identify the pigments under the microscope, but there can be little doubt that they are—red-lead (in place of vermilion), orpiment, malachite, and a purple lake or dye differing in tint from the Byzantine purple but quite different from the tint of lakes prepared from other dyes.

Now, we know that the Irish monks knew how to prepare a purple from the *Purpura lapillus*, a shell-fish found round our coasts, and we have the authority of the Venerable Bede for stating that the recipe was obtained from the monks of the East. Some authorities claim that

the use of this shell-fish as a dye in Ireland was known in prehistoric times. This might well be and yet the successful preparation of a pigment suitable for painting be unknown.

Evidently, except for the substitution of red-lead for vermilion probably from some difficulty in obtaining vermilion, the same palette was used as that common in the East.

The ultramarine, as is to be expected at that early date, was badly separated from the other minerals in the lapis-lazuli.

And now I propose to pass over several centuries and describe the pigments found on the Rosslyn Missal. This missal was reprinted with great care by the Rev. Hugh Jackson Lawlor, D.D. (Henry Bradshaw Society publications, vol. xv.), and he comes to the conclusion, on evidence that it is unnecessary for me to repeat here, that it was probably originally the property of the Cathedral Church of St. Patrick at Down, and was a copy of an earlier missal belonging to the Benedictine House of St. Werburgh at Chester, and the date is probably late thirteenth or early fourteenth century. He suggests it may have been carried off by the followers of Edward Bruce in 1316. We find it in the library of Rosslyn Castle at the close of the sixteenth century, and it was bought by the Faculty of Advocates in 1697 for the sum of 3s.

The beautiful and dainty decorated letters down the margin of the MS. are outlined in black, and are tinted with four pigments, vermilion, orpiment, ultramarine, and the shell-fish purple. Two of these pigments require a special discussion. In the first place, the orpiment has got rubbed off and is now poor and dull, but is a variety of orpiment which I have found on all the MSS. I have examined of supposed Irish origin and is different to the orpiment found elsewhere. It is a flaky variety, which when first put on must have closely resembled gold paint, judging by the few flakes that remain here and there. Where it was obtained from I do not know.

The next pigment is the ultramarine. This is still the badly separated variety we found on the seventh and eighth-century MSS., and we find therefore these Irish monks following the Byzantine tradition and ignoring entirely the developments in the painting of vellum which had taken place in Italy, France, and England. Let us take for comparison the "Ruskin Bible" in the Advocates' Library, an English thirteenth-century MS. Certain pigments are inevitably the same, but the beautifully prepared ultramarine, and the lake, probably prepared from lac, give quite a different colour scheme. It cannot be because they were unaware of the fine ultramarines used in the English monasteries: they must have preferred, as a pious tradition probably, the dull ultramarine and the purple dye from the shell-fish.

It is of interest to compare this Irish Psalter with another Irish Psalter also of the thirteenth century in the possession of the British Museum (Add. MS. 36929).

Here again the pigments are—vermilion, orpiment, badly washed ultramarine, and the purple from the shell-fish. There is also here a green which we find very largely replacing malachite from an early date up to the beginning of the fifteenth century, which was apparently prepared by dissolving verdigris in a hot pine balsam. No recipe for this green appears in any monkish MS. of colour recipes I have examined, the first known recipe being published by the physician De Mayerne in the seventeenth century.

Having now dealt fully with the pigments on these two Irish missals, let us next look at the pigments on an earlier Celtic MS., the Psalter in the Edinburgh University Library, D. v. 111, 8, on which the designs are obviously Celtic and the script Irish, but the place of origin unknown beyond that it was in Aberdeen in the sixteenth century. Professor W. M. Lindsay assigns it to the eleventh century.

There are some very interesting designs on the margins of this Psalter—an elongated grotesque animal form which seems to resemble the elephant symbol found on Pictish stones in Scotland, and a fish ornament resembling the fish symbol found on these stones. Miss Borland suggests the possibility of this connecting the book up with Pictland. However that may be, we have here again the traditional pigments: red-lead in place of vermilion as in the Lindisfarne Gospels, the Irish variety of orpiment, the transparent copper-green, the badly washed ultramarine, and the shell-fish purple.

This MS. has another interesting peculiarity. One page seems to have been painted over at a later date with gold letters on a blue-grey back-ground, only the Celtic design still showing on the margins.

Miss Borland describes this page as an imitation of late English eleventh-century work. The gold paint with which these letters have been painted is of extraordinary interest. There is no difficulty in recognising gold paint prepared by the grinding of gold leaf under the microscope. This gold is different. It consists of little rounded and kidney-shaped particles obtained as the fine gold dust from river-washed gold. I have found this same variety of gold paint on an eighth-century Canterbury Gospel (I. E. vi.), on King Edgar's Charter to Winchester, 966 (Vesp. A. viii.), and on a Canterbury Psalter, 1012-1023 (Arundel 155). I do not find it at any later date, but that is no proof that it may not have been used at a later date in Scotland.

There remain two interesting MSS. still to be referred to.

The MS. known as the Rochester MS. in the Advocates' Library. This

is an English twelfth-century MS., but it contains one initial letter which has been painted with the Irish pigments. This raises interesting speculations as to the possibility of the visit to the English monastery of an Irish monk with his paint-box, and his being allowed to paint one initial letter.

Another interesting MS. is the Hyrdmanniston Breviary (Adv. Lib. 18, 2, 13A), which is supposed to be late thirteenth century and to have come from a northern monastery. There are only two pigments, red and blue, and the blue is the badly separated ultramarine which we associate with Irish MSS.

While it would be necessary to examine a much larger number of Irish MSS. to establish a universal conclusion as to their methods, there is every indication of a different tradition just as we find on the Byzantine MSS. persisting through the centuries to the English, French, and Italian MSS.

The early English MSS. may show the Byzantine palettes, such as the late eighth-century Canterbury Gospel (I. E. vi.) in the British Museum, but the differentiation soon begins between the two traditions. I have recently come across two much later interesting examples of the persistence of tradition in the painting of religious subjects. One was a Virgin and Child on a gilt panel, obviously Greek, which the British Museum authorities place in the seventeenth century, yet the pigments used would not be found later than fourteenth century on a European MS. The other was a little book on vellum containing paintings of the costumes of all the religious orders, the product of some French monastery, and obviously from the costumes of the eighteenth century, yet the pigments used are fifteenth-century pigments.

Another interesting speculation suggested by these inquiries is the source of supply of the various pigments. The most probable source of supply for lapis-lazuli, for instance, are the famous lapis-lazuli mines at Badakshan on the Kokcha, a tributary of the Oxus, which have been open for many centuries and are described by Marco Polo. If this is the source of supply of the raw painting pigment on illuminated MSS. all over Europe from the seventh to the close of the fifteenth century, it certainly suggests that in spite of wars and changing empires and dynasties the great trade routes of the world remained open and undisturbed.

MONDAY, 8th January 1923.

GEORGE MACDONALD, C.B., F.B.A., LL.D., D.LITT.,
in the Chair.

A Ballot having been taken, the following were elected Fellows:—

Lieut.-Colonel W. BOYS ADAMS, 12 Trevor Square, Knightsbridge,
London, S.W. 7.

The Right Hon. LORD FORTEVIOT of Dupplin, Dupplin Castle, Perth.

JOHN GARDNER, Woodend, Houston.

ROBERT G. S. MACKECHNIE, Artist, 6 Westbourne Gardens, Glasgow, W.

Miss MORAG MACLAGAN, 28 Heriot Row.

ALAN L. MENZIES, W.S., Larchgrove, Balerno.

KEITH STANLEY MALCOLM SCOTT, M.B.E., B.Sc., Captain R.E.T.A.,
27 Osborne Road, Newcastle-upon-Tyne.

The following Donations to the Museum were intimated and thanks voted to the donors:—

(1) By D. HAY FLEMING, LL.D., F.S.A. Scot.

Plaster Cast of fragment of carved panel of altar tomb at St Andrews, recently returned to St Andrews from York Museum.

(2) By GEORGE MALCOLM, 8 Victoria Terrace.

Cast Iron panel of grate, 23 inches by 10½ inches, bearing the figure of Justice, and the date 1683; believed to have come from an old house in South Queensferry.

(3) By the Rev. D. G. BARRON, D.D., F.S.A. Scot.

Charm in the form of an irregularly shaped waterworn pebble, 4¼ inches long, 2½ inches in greatest thickness, with natural perforation on one side, still retaining the piece of tape by which it was suspended; found by the donor, over thirty years ago, hanging on the bed of an old fisherwoman in Stonehaven, who called it a "mare stone," to keep away nightmare.

(4) By VICTOR T. HODGSON, F.S.A. Scot., F.S.A.

Baton of the Secretary of the High Constables of Calton, of ebony, 6 inches long, ¾ inch in diameter, having a silver cap at both ends, and encircled at the centre by a band of the same metal. On one end are the arms of George II. and on the other those of the burgh of Calton—a triple tower on a rock—with the number "2," while on the central band is engraved "SECRETARY NUMBER 2 CALTON."

- (5) By JAMES L. ANDERSON, F.S.A.Scot.

Standard Yard Measure of the chapmen of Fife, Parish of Ceres.
(See subsequent communication by the donor.)

- (6) By CHARLES B. BOOG WATSON, F.S.A.Scot.

Sixteen Gun Flints, four Chipped Flints, and two Flattened Lead Bullets, found in 1919 at the foot of the rock below Edinburgh Castle, near the Well-house Tower, by the donor.

It was announced that there had been acquired through the King's and Lord Treasurer's Remembrancer:—

Earthenware Jug and forty-five Foreign Sterlings found in it, discovered at Auchenbart, Darvel, Ayrshire. (See subsequent communication by Dr George Macdonald.)

The following Donations of Books to the Library were intimated:—

- (1) By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot., the Author.
Huntly Castle. Huntly, 1922.

- (2) By THOMAS SHEPPARD, M.Sc., F.G.S., F.R.G.S., F.S.A.Scot.,
the Editor.
Hull Museum Publications, No. 128.
Quarterly Record of Additions, No. lxiii.

- (3) By WALTER J. KAYE, B.A., F.S.A.Scot., the Author.
Records of Harrogate. Leeds, 1922. 8vo.

- (4) By ROBERT FINLAYSON, Town Clerk of Arbroath, the Author.
The Freedom of the Burgh and Scottish Life in the Olden Time.
"Propter Libertatem," or some Local Historical Seals.

- (5) By THE PRESIDENT AND COMMITTEE OF THE RYMOUR CLUB.
Transactions, Part ii. vol. iii.

- (6) By Captain H. W. MURRAY, F.S.A.Scot.
Old Base Metal Spoons, with Illustrations and Marks. By F. G.
Hilton Price.

- (7) By the Rev. F. HARRISON, M.A., F.S.A.Scot., the Author.
The West Choir Clerestory Windows in York Minster.

The purchase of the following book was also intimated:—
Inventory of the Historical Monuments in Essex. Vol. iii. 1922.

The following Communications were read:—

I.

ON THE METHOD EMPLOYED IN USING THE SO-CALLED "OTTER OR BEAVER TRAPS." BY G. S. GRAHAM-SMITH, M.D., F.R.S.

Early in 1921 Mr Charles Pirrie, when digging peat on the Moss of Auquharney, Aberdeenshire, found, about 10 feet below the original surface, one of the so-called "otter or beaver traps," together with three fragments of a stout stick, apparently used in connection with the trap. In August 1921 Mr Pirrie very kindly allowed the writer to examine the trap and to make a full-sized model of it. The whole trap, and more especially the valve, had become shrunk and to some extent distorted since it was first discovered. It was presented later by Mr W. Yeats McDonald of Auquharney, on whose estate it was found, to the University of Aberdeen, and is now preserved in the Anthropological Museum, Marischal College.

This trap appears to be the only one of its kind hitherto discovered in Scotland. Munro (1919), who made a careful study of these traps, states that up to the year 1919 eleven such traps had been found in Ireland, one in Wales, and twenty-nine in widely separated localities, mostly peat bogs, on the continent, including places in Denmark, Lombardy, Germany, and Carniola. All the continental examples, except one found at Lubochin on the Vistula and now in the Danzig museum, have two valves, while all the British examples, including the specimen found at Auquharney, have only one valve.

Most writers have regarded them as traps to catch otters, beavers, wild-fowl, fish, etc., but no very satisfactory explanation of their mode of use has been given, while others have considered them to be machines for making peat blocks, musical instruments, models of boats, etc. Gillespie (1919) calls attention to a figure published by Allen (1897) illustrating a rubbing from a sculptured stone at Clonmacnois, Ireland, probably of the eighth or ninth century, in which a stag is shown with one fore-foot "fixed in a rectangular frame or hobble," and suggests that this object represents one of these traps.

The Auquharney trap resembles closely the single-valved traps illustrated by Munro, but in order to explain the writer's views on the manner in which it was used a detailed description is necessary.

The trap is about 45 inches long and 10 inches wide. It is made from an alder branch, which seems to have been split, presumably by wedges, down the centre and subsequently worked with a metal gouge, the tool marks being very distinct in many places.

An aperture (fig. 1, 1) 14 inches long by 4 inches wide pierces the machine at its centre. On the rounded surface of the trap the edges of the aperture are widely bevelled outwardly (fig. 2, 2), a feature common to most, if not all, traps hitherto found. On the split, flattened surface the wood round the aperture, except on one of the longer sides (fig. 1, 3) has been cut away to the depth of about 1 inch, so as to form a ledge. At each end of the aperture the ledge is about 2 inches wide (fig. 1, 4), but is not carried the complete width of the aperture, stopping about $\frac{1}{2}$ inch from the side (fig. 1, 5) on which the ledge is not continued. On the opposite side of the aperture the ledge is only 1 inch wide (fig. 1, 6), but is prolonged at each end as a groove (fig. 1, 7), about 3.5 inches beyond the aperture and more than 1 inch beyond the transverse ledge. The outer sides of these grooves are decidedly undercut. The result of

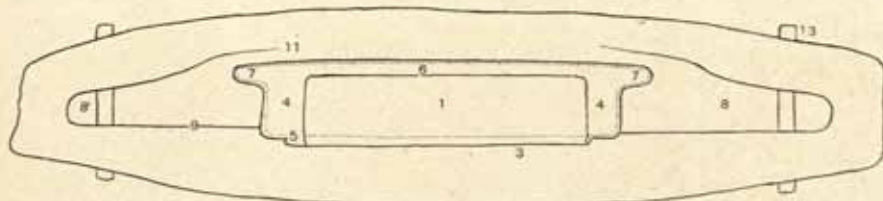


Fig. 1. View of the flat surface of the Trap.

1. Aperture; 3. Side of aperture without ledge; 4, 4. Transverse portions of the ledge; 5. Region in which the ledge stops short of the full width of the aperture; 6. Longitudinal portion of the ledge supporting the central portions of the hinge of the valve; 7, 7. Prolongations of the ledge forming grooves to accommodate prolongations of the hinge of the valve; 8. Excavations; 9. Deepest part of the excavation; 9. Vertical edge of the excavation; 11. Shallow margin of the excavation passing on to the surface; 13. Peg inserted through transverse hole.

The dotted line represents the margin of the valve when in position.

this work is a T-shaped ledge on which the trap door or valve of birch rests.

The valve, which is about 1 inch in thickness, is T-shaped so as to rest on the ledge just described, but owing to the ledge being not so wide as the aperture the valve fails to cover the opening by half an inch or more. It was noticed in the Coolnaman trap also that the valve was narrower than the aperture. The cross piece of the T acts as a hinge and its outer surface is rounded. Its projecting ends, which occupy the grooves, are oval with their long axes vertical, when the valve is in place. When, however, the valve is opened the long axes become engaged in the undercut parts of the grooves. The consequence is that when the flat surface of the trap is downwards and the valve is forced open it cannot fall away from the trap. This ingenious method of construction points to the trap having been set with its flattened surface below, as also does the pronounced outward bevelling of the aperture

on the rounded surface, which would tend to direct the foot of any animal treading on the bevelled edges on to the valve. Again, the slit provided between one side of the aperture and the free edge of the valve would tend to arrest a foot slipping over the surface of the valve and cause it to exert pressure on the free edge of the valve. At the centre of the valve is an oval hollow about 1 inch in diameter and nearly 1 inch in depth. Towards the ends of the flattened surface of the trap excavations (fig. 1, 8) have been made. They are exactly similar so that one only need be described. The deepest and narrowest part of the excavation (fig. 1, 8) is situated about 3 inches from the end of the flattened surface and is 3.25 inches deep and 1.5 inch wide. From this point the excavation widens and becoming shallower approaches the aperture. On the side of the trap on which the free edge of the valve is situated the wall of the excavation is straight and vertical and continues the line of the free edge of the valve (fig. 1, 9). This vertical wall prevents the bow, mentioned later, from being displayed towards this side in such a manner as to hinder the opening of the valve. The excavation itself is prolonged up to the ledge supporting the valve, but at this point it is only about $\frac{3}{4}$ inch deep, and its base is therefore well above the floor of the ledge (fig. 2, 10). On the side of the trap on which the hinge of the valve is situated the excavation as it approaches the aperture widens and becomes shallower till it passes on to the surface 1 inch outside the margin of the aperture (fig. 1, 11). On this side the deeper portions of the wall of the excavation are undercut. The arrangement is such that when the valve is forced open the ends of the displaced bow can lie in the curved grooves which have been provided.

An oval hole (fig. 2, 12) has been bored through the substance of the trap at right angles to its length about 1 inch below the flat surface and 1.5 inch from the end of the excavation. In these holes pieces of wood, or pegs, were present when the trap was found (fig. 1, 13).

Together with the trap were found three portions of a stick of willow, which when united showed that it had been in the form of a bow (fig. 2, 14), about 1.5 inch in diameter at its middle and tapering to each end. The ends were oval in section, with the long axis parallel to the arch of the bow.

Pieces of stick 1.5 inch thick were found with the trap in the moor of Samow, and pieces of stick, including a forked stick, with a trap at Fontega. Part of the bow was found in place in the Clonetrace trap, and a complete bow in position in one of the Larkhill traps.

In attempting to discover the way in which the trap was used experiments were made with the full-sized model. It was found that by fixing the ends of the bow in the excavations and inserting a forked

stick with a stem about 25 inches long between it and the valve, the bow acted as a strong spring tending to close the valve after it had been pushed open. The opening of the valve not only displaces the bow out of its original position but also, by the force on its centre exerted through the forked stick, increases its curvature, and thus causes a constant pressure to be exerted on any object caught between the edge of the aperture and the valve.

The process of setting the trap is as follows. It is placed on the ground with the rounded surface below, and the valve, with the hollow in its centre uppermost, is laid on the shelf. The end of the bow is placed in one of the excavations and held in position by a peg above it inserted into the transverse hole. The stem of the forked stick is next fitted into the depression in the valve, and the centre of the bow is carried

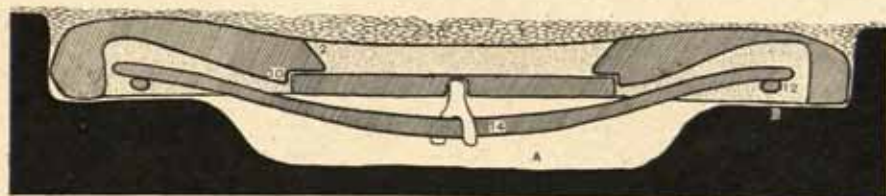


Fig. 2. Longitudinal section of the Trap when set in an excavation in the ground. The black represents earth.

- A. Excavation in the earth accommodating the bow; B. Niche in the bank of the excavation, supporting one end of the trap; C. Leaves covering and hiding the trap; 2. Bevelled edge of the aperture on the rounded surface of the trap; 10. Ledge supporting the valve; 12. Oval transverse hole admitting a peg to hold the end of the bow in position; 14. Bow passing over pegs and under forked stick.

over the fork. Then the further end of the bow is forced into the other excavation and held in place by a peg thrust through the other transverse hole.

The machine was probably placed in position with its rounded surface uppermost over a small pit (fig. 2, A) dug in a path followed by animals, the ends being supported in niches in the bank (fig. 2, B). Doubtless it was hidden by placing leaves, earth, or grass over it (fig. 2, C).

It was found that a bow made of a thick green stick formed so strong a spring that great pressure was required to open the valve, but that if the stick was left in position a few days it took the required shape and that moderate pressure on the free edge of the valve caused it to open. The foot of a large animal depressing the valve and slipping down between the free edge of the valve and the side of the aperture would be caught, and owing to the strong action of the spring could not be withdrawn. The trap is so heavy and cumbrous that no animal could drag it far.

It was noticed that the bow was less likely to become displaced after setting, and that it acted more efficiently if the ends were trimmed in such a manner that sharp edges fitted into grooves in the pegs passing



Fig. 3. Transverse section at the centre of the Trap, when set.

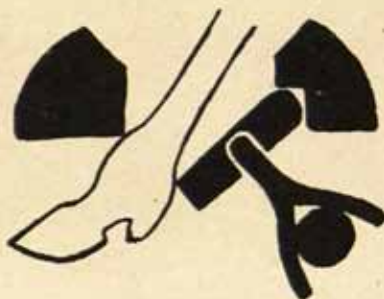


Fig. 4. Transverse section at the centre of the Trap showing the position of the valve when an animal's foot is caught between the valve and the edge of the aperture.

through the transverse holes. It is of interest in this connection to mention that Munro (1891) noticed that the pegs found *in situ* in the Clonetrace trap were "worn nearly half through."



Fig. 5. Tracing of "a Stag with its tongue protruding and its right fore foot fixed in a rectangular frame or hobble," from a rubbing by D. Griffith Davies of a cross-shaft at Clonmacnois, published by J. Romilly Allen (1897).

Of the traps found in the British Isles the Coolnahan trap seems to resemble the Auquharney trap very closely except that the hole in the valve is represented in the illustration as a complete perforation. The Clonetrace and Welsh traps are very similar but no valves were found with them. In all these the arrangement of the shelf is such that a slit must remain between the free edge of the valve and the aperture.

The Larkhill traps seem to differ in several respects, judging by the photographs of two of them published by Munro (1897). The excavations have no lateral expansions to receive the bow when the valve is open. The hinge of the valve was held in position by pins inserted above the grooves accommodating its ends.

Such pins also occur in some of the continental traps (Fontega). "In the centre of each of the existing valves is a hole of oval shape, which seems to have been burned through rather than bored with a tool, and the back of the valve is marked with a groove

for the spring to work in." In the photograph the grooved side of the valve is shown but no hole is evident, so that it apparently did not penetrate the valve. It is also of interest to note that in one of the specimens illustrated there seems to be a hinge groove on both sides of the aperture. "In a piece of wood which appears to have formed part of the mechanism of the trap portions of two small iron bolts remain."

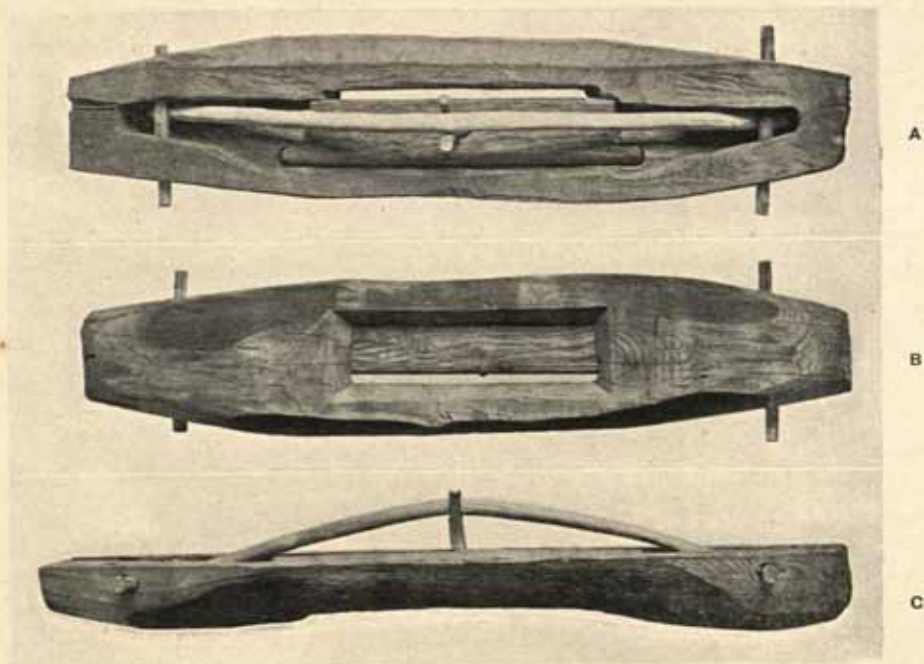


Fig. 6. Photographs of the full-sized Model of the Auquharney Trap.

- A. Flat surface, showing the position of the bow and valve when the trap is set;
 B. Rounded surface (uppermost when the trap is set), showing the bevelling of the sides of the aperture, and the space between the free edge of the valve and the side of the aperture; C. Side view.

Nearly all the continental traps have double valves. Many show oval notches cut in the free edges of the valves, but none seem to have holes in or grooves on the valves. Perhaps with two valves a sufficient opening was obtained by setting the trap with the bows passing over the valves without Y sticks. Most examples have paired excavations similar to those in the Auquharney trap.

Munro early (1891) realised that the valve was controlled by a bow, but always considered that the flat surface was uppermost, for in describing the Larkhill specimens (1919) he speaks of the rounded surface

as the "under side." Hence he had difficulty in understanding how the trap was used. After seeing the remains of the bow in the Clonetrace trap he apparently concluded that when the trap was set a bait was placed behind the valve, which was kept open by a piece of stick, and made the following statement:—"The fragmentary stick was part of an elastic bow which extended from the extreme ends of the hollows, passing over the valve but beneath the transverse bars. As a consequence of this simple mechanism the forcing open of the valve would bend the bow upwards and backwards, and so cause its ends to slip nearer the centre. . . . Moreover, as the downward pressure of the valve would be in proportion to the strength and elasticity of the bow, it would follow that if the counteracting force which retained the valve open (probably a bit of stick to which the bait was attached) were suddenly removed, the latter would close with a bang, and so jam the intercepted neck of the animal against the edge of the aperture."

The writer is of opinion that these traps were constructed for the capture of large animals, such as deer, and suggests that their remains are only found in peat because in other situations they have perished:

REFERENCES.

- ALLEN, J. R. (1897), *Proc. Soc. Antiq. Scotland*, vol. xxxi. p. 309.
 MUNRO, R. (1890), *Lake Dwelling of Europe*, p. 179; (1891), *Proc. Soc. Antiq. Scotland*, vol. xxv. p. 73; (1897), *Prehistoric Problems*, p. 239.
 MUNRO, R. and GILLESPIE, P. (1919), *Proc. Soc. Antiq. Scotland*, vol. liii. p. 162

II.

REPORT ON THE EXCAVATION OF (1) A LONG SEGMENTED CHAMBERED CAIRN, (2) A BRONZE AGE CAIRN, AND (3) A HUT-CIRCLE, IN THE PARISH OF MINNIGAFF, STEWARTRY OF KIRKCUDBRIGHT. BY ARTHUR J. H. EDWARDS, F.S.A. SCOT., ASSISTANT KEEPER OF THE MUSEUM. OBTAINED UNDER THE GUNNING FELLOWSHIP.

The Council of the Society having decided that the Gunning Fellowship for 1922 should be conferred on me for the purpose of examining some of the denuded cairns in Galloway, after consultation with Mr A. O. Curle, Director of the Royal Scottish Museum, who was familiar with the district, and to whom I am much indebted for valuable advice given before and during the time the work was in progress, it was decided that certain monuments in the parish of Minnigaff should be excavated.

Many of the cairns in this region have been opened from time to time, but we have, in respect to these, no record whatever of any scientific exploratory work.

In the old *Statistical Account*¹ for the parish of Minnigaff it is recorded that, in the year 1754, several tumuli on the banks of the Cree were opened and arms found in them. The arms were reported to have been made of brass, but were unfortunately lost. In the new *Statistical Account*² mention is made of parts of the cairns on the Moor of Drannadow having been carried away to make enclosures in the neighbourhood. Since then, in a great many instances the cairns have been despoiled of their stones and the chambers exposed, cists rudely opened and their contents scattered as valueless by ignorant seekers after treasure.

The particular locality selected in the parish of Minnigaff was the moorland of Drannadow, about four miles north-north-west of Newton-Stewart, on the estate of the Rt. Hon. The Earl of Galloway.

Through the kind offices of Mr Andrew M'Cormick, one of our Fellows resident in the neighbourhood, permission to excavate was granted by the Earl of Galloway, who also very generously consented to present any relics found to the National Museum of Antiquities.

A commencement was made in the last week of July, two labourers being obtained to render assistance in digging.

¹ Vol. vii. p. 60.

² Vol. iv. p. 131.

LONG CAIRN AT DRANNANDOW.

Situated on a knoll at about a height of 800 feet above sea-level (the highest point of the moorland of Drannandow known as the "Nappers") and immediately behind the garden of the shepherd's cottage, are the remains of a long cairn (fig. 1).

Nearly oval in form, the cairn lies with its long axis almost east and

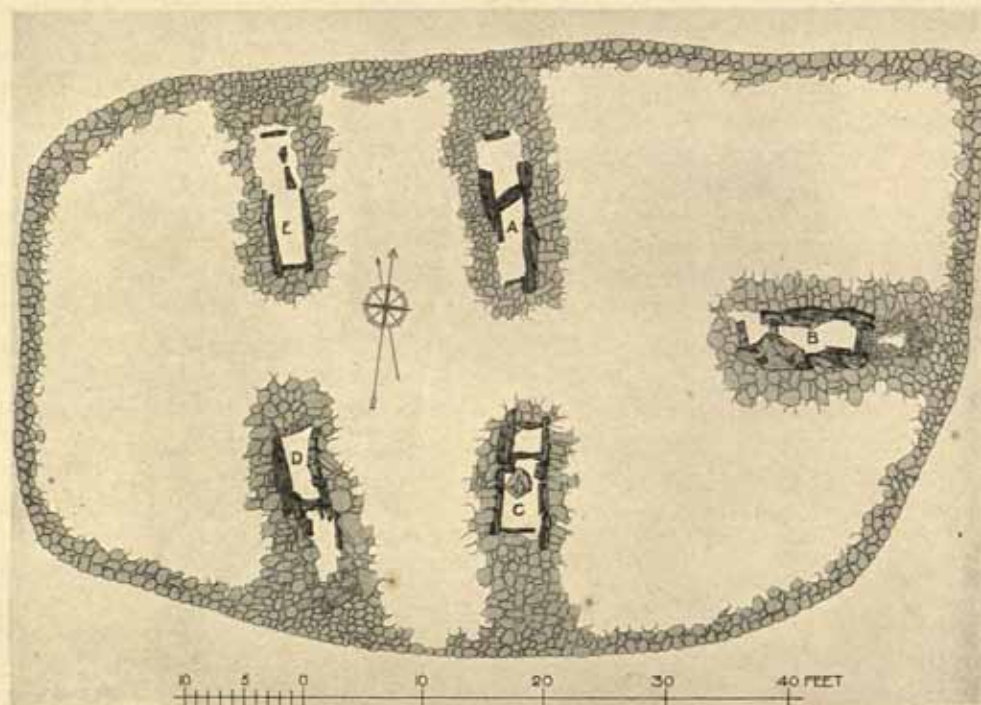


Fig. 1. Plan of segmented chambered Cairn at Drannandow.

west, and measures 79 feet in extreme length, 42 feet in breadth at the east end, 50 feet in the centre, and 40 feet at its western termination.

The cairn had been greatly despoiled in all directions, and used as a cemetery for animals and as a place for depositing household rubbish. Excavation revealed the existence of five chambers, which for convenience and future reference I shall call A, B, C, D, and E. One chamber was situated in the mesial line of the eastern end of the cairn, and two on its north side and two on its south side near the centre, lying nearly at right angles to the main axis. At the western end, directly over chamber E, there was a height of 7 feet of stones. In the centre of the

cairn, between the chambers, the height varied from 2 feet to 3 feet, the boulders being irregularly disposed. Several of the lateral stones of chambers A, C, and D just showed above ground level, and one of the lateral stones of chamber B protruded 2 feet 8 inches, practically all the stones having been removed from those parts; chamber E, only, was completely covered.

There was no indication of a frontal semicircle, and the removal of the turf and moss overgrowing the margin of the cairn revealed no evidence of any existing kerb or marginal setting.

Chamber A.—Situated some 36 feet from the eastern termination of the cairn and nearly at right angles to its main axis, this chamber lay 2° east of north magnetic or north-north-west and south-south-east. It consisted on its east side of four slabs set on edge, the second entirely overlapping the third and the third overlapping the fourth, and, on the west side of two slabs, the one overlapping the other. The first pair of lateral slabs were missing, and also the end lateral slab on the western side. The chamber, which measured 11 feet 9 inches in length, had a transverse stone at either end, and was divided into two compartments by a septal stone measuring 3 feet in length, 2 inches in height, and 6 inches in breadth.

Measurements of the lateral slabs, taken from the level of the subsoil inside the chambers, were:—

<i>East side, north to south.</i>						<i>West side, north to south.</i>							
Length. ft. ins.		Height. ft. ins.		Thickness. ft. ins.		Length. ft. ins.		Height. ft. ins.		Thickness. ft. ins.			
(1)	Missing					(1)	Missing						
(2)	4	4	3	1	1	3	(2)	5	2	3	4½	1	2
(3)	4	5	1	7	0	10	(3)	2	4	1	5	0	5
(4)	5	9	2	0	0	9	(4)	Missing					
(5)	1	5	1	5	0	3							

The northern compartment measured 4 feet 10 inches in length, its width between the remaining lateral slabs being 2 feet 10 inches. The transverse stone at the outer end of this compartment remained fast in its original position, and measured 2 feet 2 inches in length, 1 foot 4 inches in height, and 5 inches in thickness.

The southern compartment measured 6 feet 3 inches in length, the transverse stone at the end of the compartment being 1 foot 5 inches in length, 1 foot 4 inches in height, and 3 inches thick. The end lateral slab on the eastern side passed about 1 foot beyond the transverse stone.

In the outer or northern compartment, a pocket of very black soil, 8 inches in depth by about 7 inches in diameter, was found in the angle

formed by the junction of the septal stone and the first remaining lateral slab on the west side. The pocket was cleared and the soil carefully riddled and examined for relics of pottery, bone, flint, or charcoal, but none was found.

In clearing the soil from the pocket it was observed that the septal stone had been underpinned with small stones to keep it in position, the digging of the pocket having made a difference in the level of the



Fig. 2. View of Chamber B.

subsoil between the two compartments. The septal stone was thus resting, partly on the subsoil of the southern compartment and partly on a prepared base of small stones in the northern compartment, which made it quite secure, so that it could not be easily dislodged or slip into the softer soil of the latter compartment.

In the southern compartment also, no relics were found, the chamber having been disturbed at some previous date.

Chamber B.—At the eastern termination of the cairn and at a distance of 8 feet inwards from its extreme edge, was chamber B (fig. 2), nearly in the mesial line of the cairn, with its long axis lying 100° east of north magnetic or east and west. It consisted, on the south side, of three lateral

slabs of blue whinstone set on edge, the first and second overlapping, while the third, the most westerly, was pointed at the top and leant inwards so far that excavation had to be conducted very carefully to prevent it from toppling over. Three lateral slabs set on edge formed the wall of the north side of the chamber, the first being entirely overlapped by the second, and as it is small in comparison with the others, it was probably used as a wedge to make up a deficiency in the length of the transverse stone. The chamber, 9 feet in length, had a transverse stone at either end, and was divided into two compartments by a septal stone. A gap between the transverse stone at the back of the chamber and the third lateral slab in the north wall was filled with the ordinary boulders of the cairn, and from here a stone had in all likelihood been removed.

The measurements of the lateral slabs were:—

<i>South side, east to west.</i>				<i>North side, east to west.</i>			
Length. ft. ins.		Height. ft. ins.		Thickness. ft. ins.		Length. ft. ins.	
(1)	4 1	2 6	1 0	(1)	1 8	1 9	0 8
(2)	3 9	2 6	0 8	(2)	3 3	3 2	1 0
(3)	6 5	3 10	1 7	(3)	6 6	3 6	1 9

The septal stone dividing the chamber into two compartments was a rectangularly-shaped block measuring 3 feet 1 inch in length, 6 inches in height, and 9 inches in thickness. The eastern compartment measured 6 feet 4 inches in length, its greatest width being 3 feet 4 inches, narrowing on the inside of the transverse stone at the east end to 1 foot 10 inches.

The west compartment measured 2 feet 1 inch in length and 2 feet 9 inches in width, the transverse stone closing the west end of the chamber being 2 feet 3 inches in length, 1 foot 2 inches in height, and 8 inches in thickness. The end lateral slab on the south side protruded beyond this stone for a distance of 6 inches. The transverse stone closing the east end of the chamber was placed about 1 foot inwards between the first pair of lateral slabs, and measured 1 foot 10 inches in length, 9 inches in height, and 2 inches in thickness.

Both compartments had been previously disturbed, and contained a quantity of loose stones and rubbish. When this had been removed, it was found that the septal stone had been carefully built up at each corner, where it abutted against the lateral slabs, with small flat stones placed one above the other—perhaps to help in preventing it from slipping sideways if the lateral pressure became too great. Each lateral slab, at its base on the interior side, was additionally strengthened by a

regular placing of small stones against it in the form of a low wall built up from the subsoil to a varying height of from 4 to 8 inches.

The turf and moss between the outer transverse stone and the eastern termination of the cairn having been removed, a space of 4 feet parallel with the lateral slabs of the chamber was found to be closely packed with rubble, the remaining space to the edge of the cairn being laid with small boulders and flat stones fitting closely, any interstices being packed with smaller stones.

No relics were found in the chamber; the soil from both compartments was carefully examined, but it differed little from the ordinary soil in the immediate vicinity.

Chamber C.—Situated at a distance of 9 feet 3 inches from chamber A and nearly in alignment with it, and about 34 feet from the eastern end of the cairn, was chamber C, its main axis lying 14° east of north magnetic or north and south. It was filled with loose boulders, fragments of household crockery, and the bones and hair of some recently buried animal. These were removed and only earthfast stones left in position.

The chamber on its east side consisted of four lateral slabs set on edge, the first being of slate, split vertically into three pieces, and the others of blue whinstone much weathered. Two massive slabs of whinstone formed the western side of the chamber, which measured 8 feet 3 inches in length.

The measurements of the lateral slabs were:—

East side, south to north.

	Length. ft. ins.	Height. ft. ins.	Thickness. ins.
(1)	2 6	2 6	4
(2)	2 7	1 5	9
(3)	1 3	1 6	10
(4)	4 4	1 9	10

West side, south to north.

	Length. ft. ins.	Height. ft. ins.	Thickness. ft. ins.
(1)	5 3	2 0	0 8
(2)	4 9	1 10	1 3

The chamber was divided into two compartments by a septal stone measuring 2 feet 7 inches in length, 7½ inches in breadth, and 2 inches in thickness. The stone, although split into three pieces, still remained *in situ*. On lifting the pieces, I found that it had been placed on a low wall or base of small stones and earth 4 inches in height, which made the total height of the division 6 inches. A transverse slab closing the north end of the chamber was set about 1 foot inwards between the lateral slabs, and was well buttressed at its interior corners with small stones, beautifully fitted into position. It measured 2 feet 2 inches in length, 1 foot 7 inches in height, and 3 inches in thickness.

As the southern compartment had been badly quarried from the

outside of the cairn and many loose boulders and flat stones were lying about in much confusion, it was difficult to decide which had been the transverse stone at the end of this compartment, none being earthfast. After careful elimination, I decided that the slab shown on the plan might possibly be this stone, as it was lying in what one would expect to be the correct position. Since, however, this stone was not earthfast, the correctness of this decision is open to question.

The northern compartment measured 2 feet in length by about 2 feet 3 inches in width, and the southern compartment 5 feet 10 inches in length by 3 feet in width. In the latter, under two superimposed flat stones, was a quantity of black soil of little depth.

No relics were found. The space between the extreme edge of the cairn and the first lateral slab, a distance of 9 feet, was filled in with small boulders and stones, there being no evidence of a passage.

Chamber D.—With its main axis lying 6° west of north magnetic or north-north-west and south-south-east and situated about 16 feet from chamber C and 21½ feet from the western termination of the cairn, chamber D was, on examination, found also to have been previously disturbed. The main features were fortunately almost intact and differed from those of the chambers already described, showing an ortholithic section of comparatively large stones in place of a megalithic slab. This built section, with three other slabs, formed the east side of the chamber, the innermost slab being wanting. Three slabs formed the west side, one of these being over 7 feet in length and 1 foot 3 inches in thickness. The total length of the chamber was 11 feet, a wall of earth and stones dividing it into two compartments.

In detail the construction of the sides of the chamber was:—

East side, south to north.

(1) Three superimposed rectangularly-shaped stones 2 feet 9 inches in length, resting on a base of rounded boulders 11 inches in height; the rectangular stones measuring 7 inches, 3 inches, and 2 inches in thickness respectively.

	Length.		Height.		Thickness.	
	ft.	ins.	ft.	ins.	ft.	ins.
(2)	2	9	2	7	0	6
(3)	0	8	2	3	1	3
(4)	3	3	2	9	0	10
(5)	Missing					

The end slab, No. 4, had a revetment of stones and earth which extended the full length of its base; it measured 1 foot in height and 5 inches in breadth.

West side, south to north.

	Length.		Height.		Thickness.	
	ft.	ins.	ft.	ins.	ft.	ins.
(1)	1	3	1	7	0	4
(2)	2	3	2	5	0	9
(3)	7	8	2	5	1	3

No. 2 slab was overlapped by No. 3.

The transverse stone at the north end of the chamber was placed 1 foot inwards from the end of the innermost slab on the west side. It measured 3 feet in length, 1 foot 10 inches in height, and 9 inches in thickness.

A compact wall of flat stones and earth 11 inches high and 9 inches thick divided the chamber into two compartments, and it may be that on this wall a septal stone had been laid as in chamber C, but is now missing.

The northern compartment measured 5 feet 9 inches in length and from 2 feet to 3 feet in breadth. In the southern or outer compartment no transverse stone was found, but removal of loose stones and rubbish revealed that the outer end of the chamber had been closed by a series of long narrow stones, stepped one above the other, tied across the top and reinforced at the back by larger and heavier stones. No relics were found in the chamber.

Chamber E.—During the removal of boulders behind the chamber last described, the transverse stone and ends of two lateral slabs of another chamber became visible. As the height of the cairn at this point was nearly 7 feet, I hoped that this chamber would be intact; but it proved in worse condition than any of the previous four, as blue paint, broken crockery, tins, etc., were found at the very bottom, and several of the lateral slabs were missing.

The chamber lying nearly at right angles to the main axis of the cairn was 20 feet 6 inches from its western termination and 15½ feet from chamber A, the distance from the edge of the cairn to the transverse stone at the outer end of the chamber being 5 feet. Nearly in alignment with chamber D, and with the main axis lying 1° east of north magnetic or north-north-west and south-south-east, there remained on its eastern side four lateral slabs and on its western side, one.

The measurements of the lateral slabs remaining were:—

East side, north to south.

	Length.		Height.		Thickness.
	ft.	ins.	ft.	ins.	ins.
(1)	1	3	2	2	8 triangular in section
(2)	1	9	2	4	8
(3)	6	10	2	6	9
(4)	0	11	1	6	3

The second slab was overlapped by the third and the third by the fourth, the last mentioned acting as a wedge for the transverse stone.

West side.—Only one slab remained, measuring 6 feet 9 inches in length, 2 feet 6 inches in height, and 9 inches in thickness. This stone had fallen back at the top, but its base remaining in position, it is shown in the plan as if in its proper place. The transverse stone at the southern end of the chamber was placed 8 inches inwards between the lateral slabs, and measured 2 feet in length, 2 feet in height, and 4 inches in thickness. The transverse stone at the north end, standing alone, measured 2 feet 3 inches in length, 1 foot 1 inch in height, and 3 inches in thickness. The total length of the chamber was 10 feet 9 inches; there was no septal stone and no relics were found. Several large flat stones nearly 2 feet 3 inches by 1 foot 6 inches, found lying under the turf in front of the transverse stone, might have been lateral slabs or roofing stones. I noticed seven or eight similar stones in use as a pavement in front of the shepherd's cottage.

At the western termination of the cairn there was no evidence of a chamber. If such had ever existed, it had been completely destroyed, and the height of 7 feet over chamber E can be accounted for by the fact that some earlier excavator had tossed the boulders on to the top of it when pursuing his search.

Between the chambers and round the margin of the cairn the turf and bracken were removed so that the construction of the base might be examined. No marginal setting or kerb was found. In front of each chamber and between the chambers, except in the centre of the cairn, the stones lying on the subsoil were placed so regularly that I was led to the conclusion that they were not merely smaller stones which had fortuitously fallen into position, but a regular formation, suggestive of a well-packed foundation on which the larger stones had rested. This was so marked in front of chamber D and for several feet on either side of it, that I at first thought there was a pavement, and attempted to follow it up, but without success.

Although the absence of relics is to be regretted, the study of the construction of the cairn adds a little to our knowledge of the Scottish long cairn. We have here five discontinuous cist-like and almost entirely megalithic chambers within a cairn, each chamber divided into two compartments by a septal stone or wall and without a passage of approach or portal stones. The cairn bears a greater resemblance to the Arran type with segmented megalithic chambers than to those of the north of Scotland, although it differs from the Arran cairns, inasmuch as it contains five chambers of two compartments each, while the majority of those in Arran and Bute have only one, and the number of

compartments into which this one chamber is divided, ranges from a single compartment to as many as five.

Further, the typical chamber of the Arran cairn is usually provided with portal stones; in a series of twenty-five chambers in cairns in Arran and Bute and two in cairns in Argyllshire, examined by Professor Bryce, the presence of portal stones is reported in thirteen, and is considered by him to be characteristic of this particular class of monument.

Although portal stones were absent in the Drannadow chambers, it cannot be assumed that they have never existed, as their proximity to the edge of the cairn would make them easy of removal by anyone desirous of acquiring them for building purposes.

The low elevation of the septal stones in comparison with the height of the lateral slabs forming the sides of the chamber is worthy of note, as it disposes of the question, in this cairn at least, as to whether they were used for constructional purposes or as actual divisions of the chamber. Assuming that at no time was the height of the septal stones increased by any superimposed structure, they would be quite useless as a provision for preventing the collapse of the sides, when the lateral pressure became too great, and their purpose must therefore have been to divide the chambers into compartments.

Cairns of this type with more than one chamber are few in number; in Bute there is only one, at Glecknabae,¹ which has two chambers, much contracted and without compartments, both chambers being provided with portal stones. In Arran, the Lower Cairn, Dunan Beag,² is recorded as having two chambers, one with two compartments and the other with three, one chamber only having a portal stone. Another at Dunan Mor³ has three chambers—one of two compartments, one of three compartments having portal stones, and the third represented by two slabs set on edge and in line with each other. Of these, the last mentioned presents the closest analogy, the three chambers being arranged in radial fashion—one at the southern margin, the second at the western, and the third at the south-east corner of the cairn; but Professor Bryce expresses the opinion that "it is not possible to avoid the conclusion, either that two of the chambers are secondary and placed without respect to the structural idea as a whole, or that the entire structure represents a departure *ab initio* from the typical plan." One other cairn which presents a similar disposition of its chambers within the structure is that of Cuffhill, in the parish of Beith, Ayrshire.⁴ The facts relating to the earlier excavation of this monument are vague and unsatisfactory, but the plan reproduced in the *Proceedings* shows

¹ *Proceedings*, vol. xxxviii. p. 37.

² *Ibid.*, vol. xliii. p. 350.

³ *Ibid.*, vol. xliii. p. 343.

⁴ *Ibid.*, vol. xi. p. 278.

its resemblance. Although the Drannadow cairn differs in style from a structure such as that at East Bennan, in Arran,¹ which contained a single chamber at one end of the cairn, divided into five compartments and having a frontal semicircular setting of stones, the central stones of which formed portals leading to the chamber, it without doubt served the same purpose in having a series of chambers divided into compartments for successive interments.

In the foregoing, in making comparisons with other cairns, I have only dealt with those which have been scientifically excavated and reported on; but there are at least two other cairns in the neighbouring county of Wigtown, at High Gillespie² and Kilhern,³ which show in their external aspect and the arrangement of the chambers a striking similarity to, if not an exact counterpart of, the cairn at Drannadow. The number of chambers recorded at High Gillespie is three, and at Kilhern four; but both cairns are in a dilapidated condition, and as yet no scientific exploration of them has taken place.

A BRONZE AGE CAIRN AT DRANNADOW.

Situated 200 yards south-south-west of the long cairn previously described is another cairn (fig. 3), nearly circular in form, its margin overgrown with turf and moss and surmounted near its centre by a small modern cairn. On its east side an attempt had been made to explore it, but fortunately without success.

The cairn, which consists of loose boulders and small stones, measured 46 feet in diameter, and was of low elevation; its greatest height at the centre being about 3 feet. No marginal setting or kerb was found, and the original periphery was somewhat difficult to determine, as in all probability many of the stones forming the original height had become displaced and fallen outwards.

In order to examine the construction of the monument and not merely to confine myself to the discovery of a cist and relics, I had the loose boulders and smaller stones of which it was formed removed down to the subsoil, earthfast stones and parts showing structural evidence being left in position.

In the western half of the cairn and at a distance of 11 feet inwards from its edge, a double wall, 2 feet 9 inches in breadth, of twenty-two boulders set on end and shouldering each other, ran from the north side to within a distance of 11½ feet of its southern edge. Some

¹ *Proceedings*, vol. xliii. p. 337.

² *Inventory of Monuments and Constructions in Galloway*, vol. i. (*County of Wigtown*), No. 346.

³ *Ibid.*, No. 269.

2 feet farther east was a parallel row of nine upright boulders, averaging 15 inches in height and set about 12 inches apart; the spaces between these stones and the intervening space between them and the double wall being filled with small rubble. From the northern extremity of

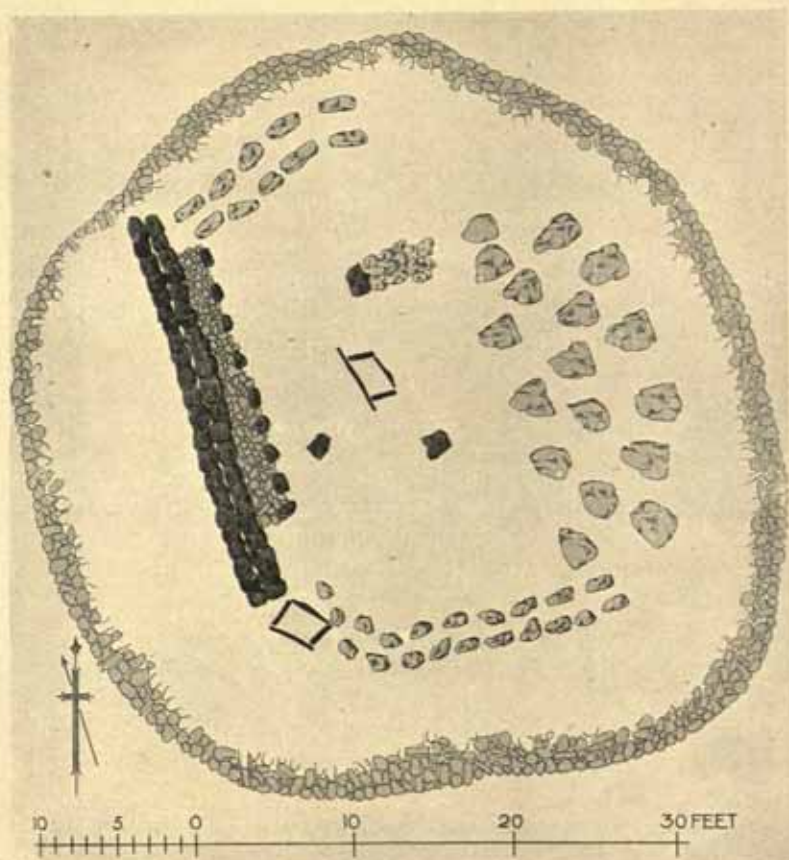


Fig. 3. Plan of Bronze Age Cairn at Drannadow.

this construction, a double row of boulders irregularly placed extended eastwards for 14 feet.

At a distance of 1 foot from the southern extremity of the first-mentioned double row of boulders the first cist was discovered, the upper face of the cover stone being above ground level. From this cist another double row of boulders stretched eastwards for a distance of 18 feet. In a northerly direction from the east end of this last-mentioned double row and extending to within $12\frac{1}{2}$ feet of the north side of the cairn, a

series of irregularly disposed large-pointed boulders were set fast in the subsoil, inclining towards the centre. The whole formed a D-shaped construction, approximative to that described by Mr J. E. Cree, F.S.A.Scot., in his excavation of a cairn at Inverlael, Inverbroom, Ross-shire;¹ the flat side of the D being in both cases on the west side of the cairn. In a cairn at Eddertoun, in Ross-shire,² a similar D-shaped construction was discovered by Dr Joass, and in another at Foulden, in the county of Berwick,³ excavated by Mr J. Hewat Craw, F.S.A.Scot. In the last cairn this feature was much smaller than in the other two and it closely surrounded the central cist.

During the removal of the agglomeration of boulders from the centre of the cairn, I observed that the majority lay on their sides, point upwards, sloping towards the centre of the cairn, and this arrangement was very pronounced round and above the second cist which was discovered, and which lay a little to the north-west of the centre. At a distance of $3\frac{1}{2}$ feet from the north and the same from the south of the cover stone of the cist, and nearly in a direct line with its eastern edge, two large stones were set upright in the subsoil, and a third at a point 3 feet from its south-western corner. The last-mentioned stone, leaning slightly outwards, was supported behind by a backing of smaller stones built against it to nearly its own height. These three stones measured in height 1 foot 9 inches, 1 foot 7 inches, and 1 foot 11 inches respectively, and were roughly quadrangular in form, measuring from 1 foot 3 inches to 1 foot 6 inches in thickness.

A section of rough walling, 1 foot 9 inches in height and 2 feet 3 inches in thickness, abutting against the east side of the stone on the north side of the cist, extended eastwards for a distance of 4 feet.

At Eglwys Bach, in Denbighshire, a similar feature was observed within a tumulus excavated by Mr Willoughby Gardner, F.S.A.Scot., the circle of stones surrounding the interment, however, being much more complete.⁴

The enclosure⁵ or partial enclosure of the central cist by a definite setting of stones within the body of a cairn has now been reported by several excavators, and probably many other Bronze Age cairns and tumuli already excavated would have shown analogous, if not exactly similar, constructions had sufficient care been taken in looking for internal structures while removing the agglomerated mass forming their bulk.

¹ *Proceedings*, vol. xlviii. p. 118.

² *Ibid.*, vol. vii. p. 268.

³ *Ibid.*, vol. xlviii. p. 326.

⁴ *Arch. Cambrensis*, sixth series, vol. xliii. p. 324.

⁵ *Scotland in Pagan Times, Bronze and Stone Ages*, p. 4; Bateman, *Ten Years' Diggings*, p. 63; Mortimer, *Forty Years' Researches*, p. 100, No. 55.

The cist (fig. 4) in the centre of the cairn was evidently the primary structure, being well protected by the mass of stones above and around it. Its long axis lay almost north-west and south-east, and its measurements inside were 2 feet $6\frac{1}{2}$ inches in length, 1 foot 9 inches in breadth at the south end, 1 foot $5\frac{1}{2}$ inches in breadth at the north end, and 1 foot $8\frac{1}{2}$ inches in depth. The bottom of the cist was unpaved and contained a few loose flat stones. The sides were formed of

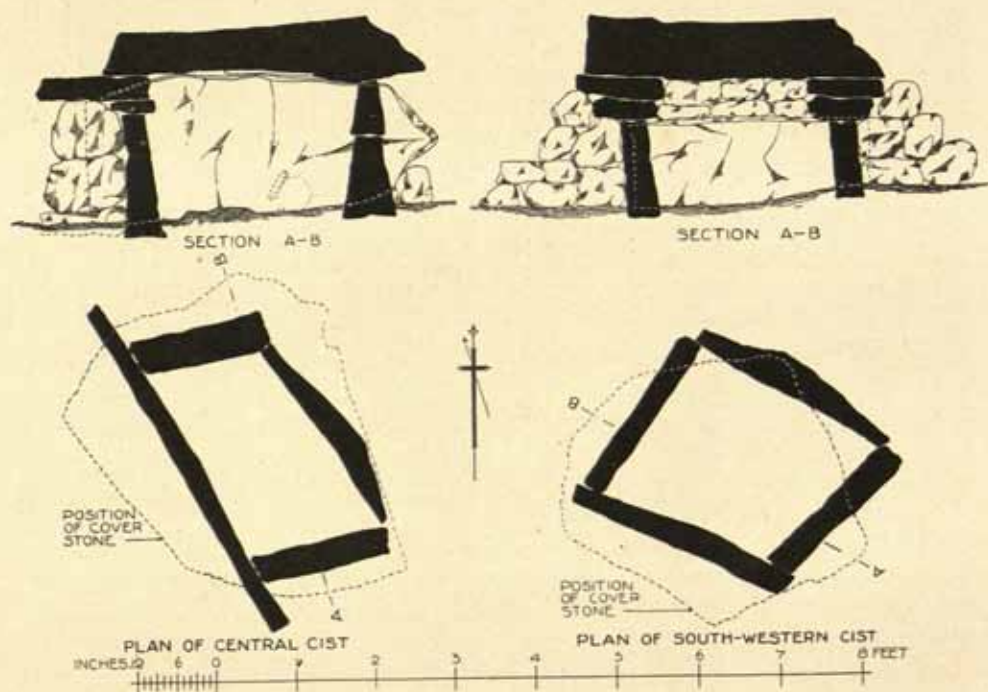


Fig. 4. Plans and sections of Cists in the Bronze Age Cairn.

whinstone slabs set upright, and, to equalise the height, horizontal slabs had been superimposed at the south end and east side. The south end was formed of one stone $4\frac{1}{2}$ inches in thickness, and the north end of two sub-triangular stones superimposed, the lower at its base being 7 inches in thickness and the upper at its apex 3 inches in thickness. The west side stone, 4 feet 7 inches in length, protruded 7 inches on either side beyond the end stones, and measured $3\frac{1}{2}$ inches in thickness. The east side stone, 2 feet 7 inches in length, was placed within the end stones, and measured from 2 inches to 4 inches in thickness. A single large slab of blue whinstone formed the covering stone. It

measured 4 feet in length by 3 feet 4 inches in breadth, and 9 inches in thickness. On account of its weight no attempt was made to remove it, and entrance was obtained to the cist by removal of one of the stones at the east end. An urn of the food-vessel type (fig. 5) was found lying on its side near the north end. The loose deposit on the floor of the cist was passed through a riddle and an unworked flake of flint and a fragment of charcoal were recovered.

The urn is made of a light umber-coloured clay, and measures $5\frac{1}{8}$ inches in height, $5\frac{9}{16}$ inches in external diameter at the mouth, 6 inches in diameter at the shoulder, and $2\frac{3}{4}$ inches in diameter at the base. In form the lower part consists of a low truncated and inverted cone;



Fig. 5. Food-vessel Urn from central Cist in Cairn.

above is a slight shoulder with a small groove. From the shoulder the neck describes a cavetto curve and terminates $\frac{1}{4}$ inch from the lip, which is bevelled on the inside and decorated with three rows of a herring-bone pattern. From the lip to the base the exterior is encircled with sixteen rows of herring-bone pattern formed by a pointed tool.

That the south-western cist (figs. 3 and 4) was secondary is suggested by its proximity to the margin of the cairn, and by its not being covered with any depth of boulders, the upper face of the cover stone showing above ground level before excavation. Also its position in the angle of the wall, seemingly interrupting the continuity of this structure, suggests that the grave was placed there at some later date than the wall formation.

The cist lay with its long axis almost north-west and south-east, and measured 2 feet 4 inches in length by 2 feet in breadth, and 1 foot $6\frac{1}{2}$ inches deep. The bottom of the cist was covered with a red sandy

deposit and contained a few loose flat stones. On all four sides the height of the upright slabs supporting the massive cover stone was equalised by the addition of horizontal slabs superimposed. Single stones formed the north-west and south-east ends, that on the north-west being 2 feet in length and 4 inches in thickness. The side stone on the south-west was 2 feet 10 inches in length and $3\frac{1}{4}$ inches in thickness, and that on the north-east 2 feet $6\frac{1}{2}$ inches in length and from 2 inches to 6 inches in thickness. The cover stone was a massive slab of blue whinstone, measuring 3 feet 8 inches in length, 3 feet in breadth, and 9 inches in thickness.

Entrance to the cist was obtained by carefully removing the slab forming the north-east side, and the deposit on the bottom was passed through a riddle. No charcoal or flint was found, but only fragments of the wall of a food-vessel urn. The original diameter of the mouth of this urn had been $4\frac{1}{4}$ inches. The neck is formed by two parallel grooves each $\frac{7}{8}$ inch in width; the lip is bevelled in the interior and decorated with a single row of herring-bone pattern made with a pointed tool. The neck and wall are decorated with a similar pattern. No part of the base was found. In neither of the cists were any vestiges of human bones recovered, and the burials had most likely been by inhumation.

A HUT-CIRCLE IN KNOCKMAN WOOD.

In the woods of Clauchrie and Knockman, 2 miles north of Newton-Stewart, numerous cairn-like heaps of boulders, and remains of ancient enclosures of various sizes, mostly circular in form or nearly so, are to be seen in large numbers. In Clauchrie these heaps seem to be more in evidence than in Knockman, but owing to the luxuriant growth of bracken it is difficult to judge if this is so. Mr Andrew M'Cormick, who had gone over the ground many times during the winter when the bracken had fallen, drew my attention to the enclosures—some large, as if they had been used as cattlefolds, others small and mere swellings on the natural surface of the ground, and a goodly number seemingly of a hut-circle type, with the remains of walls scattered round the periphery in the form of loose boulders. Occasionally portal stones of the enclosures remained *in situ*, and I selected for excavation a site in which this feature was evident.

The site, which was situated near the south-east edge of Knockman Wood, before excavation presented the appearance of a shallow oval depression, measuring 13 feet by 11 feet, and surrounded by a bank of stones and earth, the greatest height of which was about 2 feet. The hollow was filled with decomposed vegetable matter, and two upright

stones had formed the portals of a doorway which faced north-north-east, away from the prevailing south-west wind (fig. 6).

Examination of the surrounding bank showed that the hut had been formed by a wall of stones, evidence of definite coursing being found on the inner face of the structure (fig. 7). The width of the base of the wall was about 4 feet on either side and 9 feet in rear. A passage 9 feet 3 inches in length and 1 foot 3 inches in width at the entrance, with an angled recess on its west-north-west side, had formed a means of approach. Direct access to the inside of the hut proper was obtained



Fig. 6. Entrance to Hut-Circle, Knockman Wood.

between two portal stones 1 foot 3 inches apart, that on the east-south-east side measuring 1 foot 3 inches in height, 2 feet 6 inches in length, and 1 foot 6 inches in thickness, and the other on the west-north-west side 11 inches in height, 1 foot 6 inches in length, and 1 foot 6 inches in thickness.

In clearing the interior a depth of about 1 foot 6 inches of decomposed vegetable matter was first removed, and then about 1 foot of loose stones and black soil. At a depth of 2 feet 6 inches the soil was hard and compact. Selecting one particular point, we continued the excavation to a greater depth, and at 3 feet 6 inches from the surface a dark layer of charcoal-like consistency was encountered. The whole of the interior was carefully cleared from this level, and the original floor laid bare, the black layer, which was in places nearly 2 inches thick, completely

covering its surface; probably this layer was the remains of a carpet of rushes or twigs. The floor had been roughly paved in parts, and immediately below the portal stones a large earthfast boulder had formed a convenient stepping-stone to assist entrance and egress.

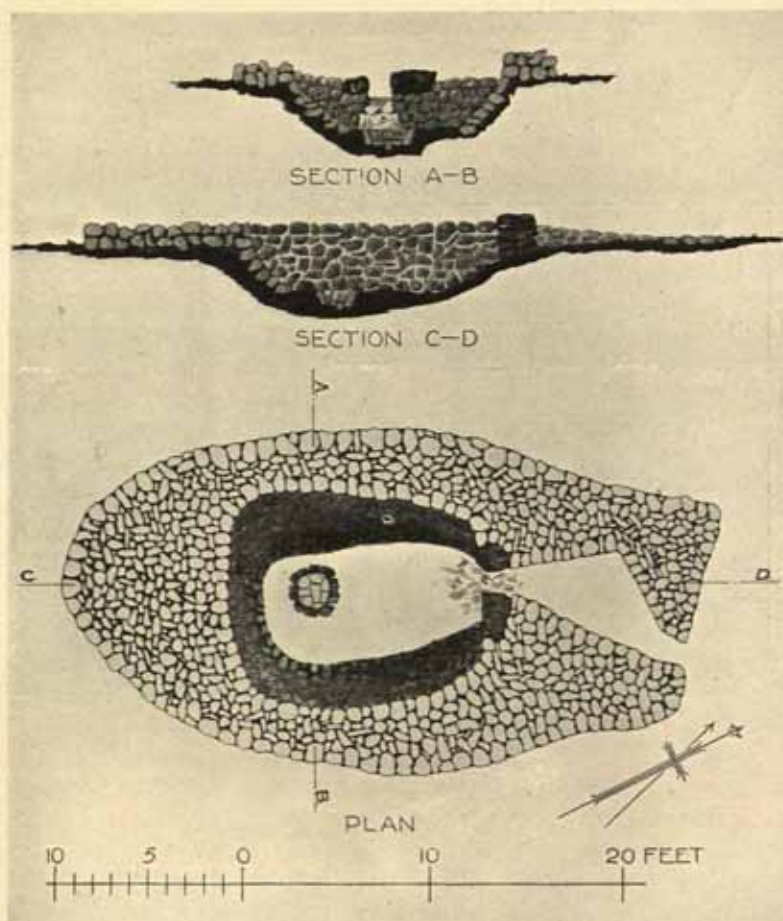


Fig. 7. Plan and sections of Hut-Circle, Knockman Wood.

Situated nearly opposite the doorway and about 1 foot 6 inches from the back wall, was a hearth sunk 7 inches below the floor level, built round with kerb stones which projected some 4 inches above the floor, and having a slightly hollow stone-lined interior 1 foot 8 inches in diameter. The floor measurement of the interior of the dwelling was 11 feet 6 inches in length by 5 feet 9 inches in breadth, while at the

surface level, owing to the walls gradually slanting outwards as they neared the top, the measurement was 13 feet 6 inches in length by 11 feet in breadth. The walls were lined with small rough boulders. No relics were found to aid in determining the chronology of the structure, which resembles some of the so-called pit dwellings of England rather than the Scottish hut-circles, and it is therefore to structural analogies that we must look for comparisons.

In the excavation of a hut-circle at Grimspound, Dartmoor,¹ a sunk hearth similar to that described was found in Circle No. 7; but here the comparison must cease, as the floors of the numerous hut-circles excavated there are but little, if at all, below the surface of the surrounding ground. Although also unsuitable for purposes of comparison, the only recorded excavation of pit dwellings in Scotland is that made by Mr Ludovic M'L. Mann, F.S.A.Scot., who excavated three of these structures in the Mye Plantation, Stoneykirk, Wigtownshire.² These were some 7 feet in depth, and had had walls lined with branches and twigs and a floor supported on short piles, driven into the clayey subsoil, the pottery and other relics found being more characteristic of the Stone Age than of the Bronze Age. In the parish of Muirkirk, Ayrshire,³ a circular pit 4 feet in diameter, and filled with stones which were darkened as if by fire, was found near the centre of a hut-circle, the diameter of which was from 34 to 38 feet. At a depth of between 4 and 5 feet, and underneath the stones, a thin layer of carbonised vegetable matter appeared, and below this were found fragments of a beaker urn of the Bronze Age.

To obtain a closer analogy to the Knockman dwelling it is necessary to refer to similar structures in England, and notably in Kent.⁴ Here the prevailing type was a circular pit of from 10 feet to 30 feet in diameter, and from 3 to 4 feet in depth, surrounded by a bank, the floor in many of the pits being covered with a black deposit similar to that found in Knockman, but the hearth or cooking-place was situated outside the dwelling.

In pits at Hayes Common⁵ and Millfield, Kent,⁶ numerous flint objects of neolithic type were discovered, but there was an entire absence of pottery. At Milton-next-Sittingbourne,⁷ also in Kent, neolithic flint

¹ *Trans. Devonshire Assoc. for the Advancement of Science, Literature, and Art*, 1894, vol. xxvi. pp. 101-121.

² *Proceedings*, vol. xxxvii. pp. 370-415.

³ *Ibid.*, vol. xlviii. p. 376.

⁴ *Journal Anthropological Institute*, 1899, vol. xxix. pp. 121-141.

⁵ *Ibid.*, pp. 124-141.

⁶ *Proc. Soc. Ant. Lond.*, sec. series, vol. xvii. pp. 216-221.

⁷ *Arch. Cantiana*, vol. xiii. pp. 122-126.

objects were found, and, in addition, pottery described as flat-bottomed basins with holes pierced round the rim. At Peterborough, in Northamptonshire,¹ in a series of pits probably the remains of similar structures, part of a round-bottomed vessel of Stone Age type, and fragments of vessels of beaker or drinking-cup type of the Bronze Age, were found in addition to neolithic flint objects.

From the evidence obtained in these English excavations the inference is that the chronological period of the pit dwellings of England extends from the Stone Age to the Bronze Age; but when we consider the hut-circles of Scotland, so far no evidence has been forthcoming to permit of our assigning them to the neolithic period. It is believed, however, that the hut-circle found in so many parts of the country associated with small cairns which appear to be sepulchral, belongs to the Bronze Age,² and the example at Muirkirk already referred to seems to confirm this. In addition, many are found in hill-forts which belong to the Iron Age.

I must express my thanks to Mr Alexander Young, Architect, Newton-Stewart, who voluntarily assisted me in the measurement of the various structures excavated. This help was invaluable, as the very short spells of fair weather during the time the work was in progress were so infrequent, that, but for his timely assistance, the task would have been well-nigh impossible during the short time at my disposal. I have also to thank him for the preparation of the excellent plans illustrating the report.

¹ *Archæologia*, vol. lxii. p. 333. *

² *Inventory of Monuments and Constructions in Galloway*, vol. ii. (Stewartry of Kirkcudbright). Introduction, p. 34.

III.

THE ROYAL CASTLE OF KINDROCHIT IN MAR. BY W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

The scanty remains of the great Aberdeenshire Castle of Kindrochit occupy a very strong position on the right bank of the Cluny Water, a short distance from its confluence with the Dee, and immediately above the bridge which connects the two portions (Auchendryne and Castleton) of the village of Braemar. In no place are the walls more than 10 feet high, and for the greater part they are reduced to mere foundations. These fragments are much overgrown with grass and moss, and the whole site is obscured by larch and rowan trees, scrubby undergrowth and luxuriant nettles, amidst which the hard, metamorphic bedrock here and there crops out in rounded, ice-worn bosses. A road on the east side, and various erections connected with the adjoining farm, encroach upon the precincts. Also a considerable amount of refuse has been dumped upon the site, so that what remains of the castle is now "a desolation of rubbish and weeds."¹ But by a careful examination of the existing masonry, and of the green mounds with protruding stones which mark buried courses of wall, it is possible to recover a fairly accurate ground plan (fig. 1), although a completely satisfactory survey would entail extensive excavation.

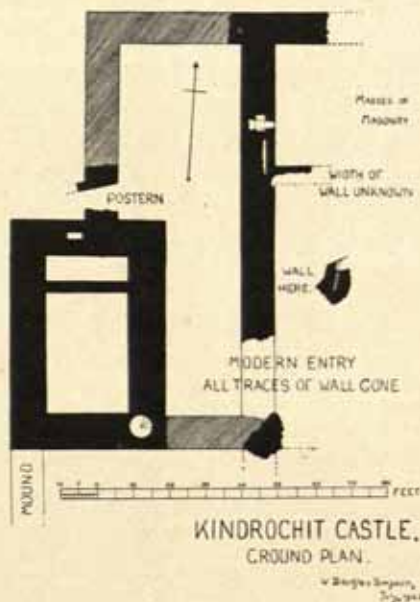


Fig. 1. Kindrochit Castle: Plan.

The chief feature of this castle appears to have been a great master-tower or keep (fig. 2), measuring 64 feet by 43 feet over the walls, which are 10 feet thick. This keep is set with its main axis north and south. A partition 3 feet thick divides its basement into apartments measuring 7 feet by 23 feet and 33 feet by 23 feet respectively. Probably the small northern chamber was the prison. In the north wall of the keep, near its west end, a vertical garderobe flue is exposed in the thickness of the

¹ See an indignant protest by the Rev. Dr George Walker, Aberdeen, in "The Cluny and its Sources," in *Aberdeen Daily Journal*, 19th July 1920.



Photo R. M. Clark, July 1908.

Fig. 2. Kindrochit Castle: E. and N. walls of Keep, looking N.W. The garderobe flue in the N. wall is covered by logs.

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wall. It measures 4 feet by 1 foot 10 inches, and is 5 feet deep to the top of the rubbish by which it is choked. My friend Dr William Kelly, who made an examination of the castle in July 1908, tells me that he explored this flue, and found that it turned westward as if to find an outlet towards the Cluny. In the third edition of Mr Alexander I. McConnochie's *Guide Book to Deeside*, mention is made of the discovery in this tower of a spiral stair. On that occasion two steps were found, one of which was subsequently stolen, while the other is still preserved in the garden of Rowan Cottage, hard by the castle (fig. 3). This step is in Kildrummy freestone, and measures 3 feet 1 inch in length exclusive of the newel, 5 inches in diameter, which is one quarter engaged with the step. At its narrowest part, at the newel, the step is 5 inches broad; at the opposite end the breadth is 1 foot. The height of the step is 8 inches. Marks of the chisel are still very distinct. No trace now remains in the tower of this stair, but Miss Clark, Rowan Cottage, pointed out to me the exact place at the south-east angle, and it has accordingly been shown on plan.¹

This great keep occupies the south-west corner of a large courtyard, surrounded by strong walls of *enceinte*, 9 feet thick, and connected with a range of apartments along the opposite side from the keep. Of this *enceinte* the west curtain, parallel with the main axis of the keep, springs from a point about the middle of its north face; while the south curtain continues the corresponding wall of the keep. The latter thus projects only from the west front of the *enceinte*, and encroaches upon the courtyard within, which appears to have measured about 103 feet in length (north and south) by 34 feet in greatest breadth (east and west). In the west curtain, close to and covered by the projecting keep, are the remains of a postern or water-gate, leading out to the steep slope down to the Cluny. The north jamb remains, showing that the passage had narrowed outwardly. On this side also a projecting screen wall, with the shoulder of the keep on the other side, canalised the passage into a long, narrow trance.

The west curtain beyond the postern, and the whole north curtain



Photo R. M. Clark, July 1908.]

Fig. 3. Kindrochit Castle: Step from newel stair in Keep.

¹ See McConnochie's *Deeside*, 3rd ed. (1900), pp. 196-7.

except a small length at its east end, are now reduced to grass-grown, stony mounds—although the base course of the west wall is exposed at intervals, allowing it to be accurately set out in the plan. The east enclosing wall is better preserved, and may be traced in masonry from the north-east angle southwards for some 80 feet. Beyond this it is represented by a mound engaging with the south curtain, which also is reduced to a mere mound prolonging the south wall of the keep. A



[Photo R. M. Clark, July 1908.]

Fig. 4. Kindrochit Castle; Vent in E. wall, looking S.W.; partition wall to left. Note typical fourteenth- to fifteenth-century masonry.

small fragment of masonry *in situ* remains at the south-east angle. Though of the same thickness as the others, the east wall of the courtyard was not a curtain, for the remains of some apartments exist along its outer face. At 34 feet from the north-east angle a small fragment of partition wall is preserved. About 25 feet beyond this are the much destroyed remains of another wall, connected with which is a mass of ruinous masonry, exhibiting some traces of the rebate of a door opening towards the east, with a bar-hole measuring 1 foot 3 inches in height and 6 inches broad, and extending back about 5 feet into the wall. The confusion here is so great that it is not certain whether this masonry is really *in situ*.

At 11 feet north of the first partition, and 2 feet above the present ground level here, a curious hole (see plan, fig. 1, and fig. 4) exists in the east face of the courtyard wall. On the outside it is partly ruined, but has apparently been about 1 foot 5 inches square. Towards the courtyard it widens rapidly, and is roofed with flat slabs. Its aperture to the courtyard, if such existed, is choked with *débris*. At 2 feet 9 inches in there occur lateral recesses, 2 feet 9 inches broad, of which that on the north measures 1 foot 7 inches in greatest depth, while the other one is 9 inches in greatest depth. The roof of these recesses, with that of the passage between, is stepped up 1 foot 9 inches above the rest of the passage, which elsewhere is about 2 feet high. It is difficult to conceive what purpose this vent may have served. There is a vertical facing in the ruined courtyard wall to the south (see plan, fig. 1), apparently the cheek of a bar-hole, but it is above the level of the vent.

The masonry of the castle is exceedingly stout. A hearting of stones of all sizes, grouted in run lime, is cased by large undressed "heathens" or surface boulders, some of which are 2 feet or more in diameter. In some places the fallen masonry lies in great masses, in which stone and lime cohere as firmly as ever. The style of the work is typical of the fourteenth- and fifteenth-century castles in Aberdeenshire, marked by the very free use of mortar in filling the interstices between the large irregular stones. Small flat pinnings inserted horizontally, which are so characteristic a feature in sixteenth-century work, are here totally absent.

Obscure foundations, not easily distinguished from the remains of comparatively modern structures, suggest that the buildings of the castle have been continued south of those described. A wall may still be traced, running south for some 51 feet from the south-west angle of the great tower. It seems to terminate in an oblong structure with an apsidal south end, measuring about 33 feet by 17 feet over the walls (see fig. 5).

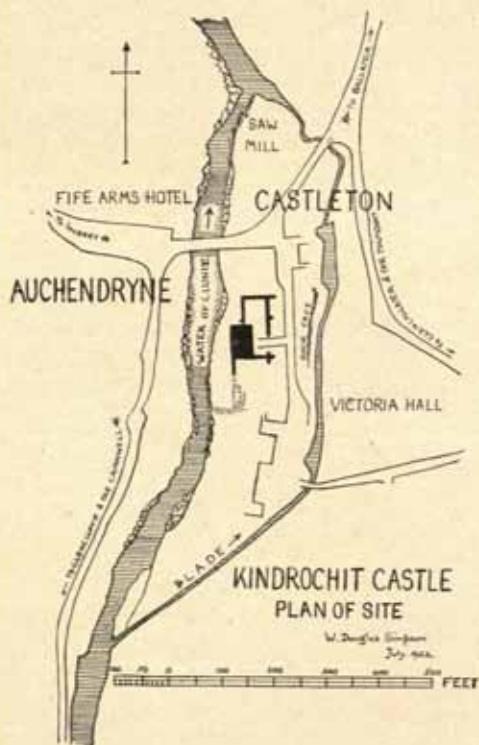


Fig. 5. Kindrochit Castle: Plan of Site.

This structure, which may have formed an angle tower of a southern courtyard, is now traceable only by prominent grassy mounds.

Strong in themselves as the castle buildings have clearly been, they occupy a position of very great natural strength (fig. 5). Westward the ground slopes rapidly from the walls to the deep and picturesque rocky gorge through which the foaming Cluny hurries impetuously to the Dee. On the east front the site of the castle is now bounded by a road leading to a farm. Beyond the road a small strip of rough wooded ground contains a mill-lade, which is taken off the Cluny about 200 yards above the castle, and joins it again below the bridge. Opposite the castle the lade is about 30 yards from the nearest part of the ruins. There can be little doubt that this lade is an ancient feature which, in addition to supplying the castle mill, had played its part in the defensive arrangements.¹ Abreast of the castle it is partly rock-cut, a vertical stone face, now about 4 feet high, probably scarped, occurring at a distance of about 7 yards from the left bank of the lade. No doubt the castle buildings were carried right to the edge of this scarp, but have been obliterated by the construction of the farm-road. I am assured locally that foundations have on several occasions been unearthed both beneath the road and in the wood beyond it. Thus the lade would have answered the purpose of a moat, and doubtless the isolation of the castle area was completed by transverse ditches north and south. The northern ditch must have been obliterated by the construction of the modern road and bridge over the Cluny; but a stone-built conduit, running northward, exists beneath the floor of Rowan Cottage, and doubtless drained into this ditch. Some traces of the southern ditch seem yet to exist in the rapid falling of the ground beyond the apsidal building south of the keep.

At Invercauld House there is preserved a remarkable old map, on a large scale and carefully painted by hand, of Auchendryne and Castleton. Through the kind permission of Colonel Alexander H. Farquharson of Invercauld, I have been privileged to copy the portion which includes Kindrochit (fig. 6). It gives a very interesting representation of the castle ruins, which are shown as existing to a considerable height. The mill-lade is clearly apparent, and also the old bridge across the Cluny, opposite the castle, and so several yards above the present structure.² Doubtless the postern on the west side of the

¹ My attention was first directed to the significance of the lade by Dr Kelly.

² In 1732 the bridge over the Cluny was of timber—*Collections on the Shires of Aberdeen and Banff*, p. 641. Rev. Charles Cordner, in his *Antiquities and Scenery of the North of Scotland* (1780), p. 22, has the following note, which clearly refers to Kindrochit: "A little way above the Castle of Brae-Mar there is a square tower upon the top of a rock; the rock on three sides is washed by the cascades of a rivulet, which falls into the Dee. The building is

castle was for giving convenient access to the bridge. Colonel Farquharson informs me that the date of this map is about 1775. I do not doubt that the representation of the castle is meant to give an approximate idea of the appearance of the ruins at that date, if only because the same map gives a very neat and exact little drawing of the more modern Castle of Braemar. Incidentally, the map affords us an interesting picture of Castleton in the eighteenth century, with its hand-

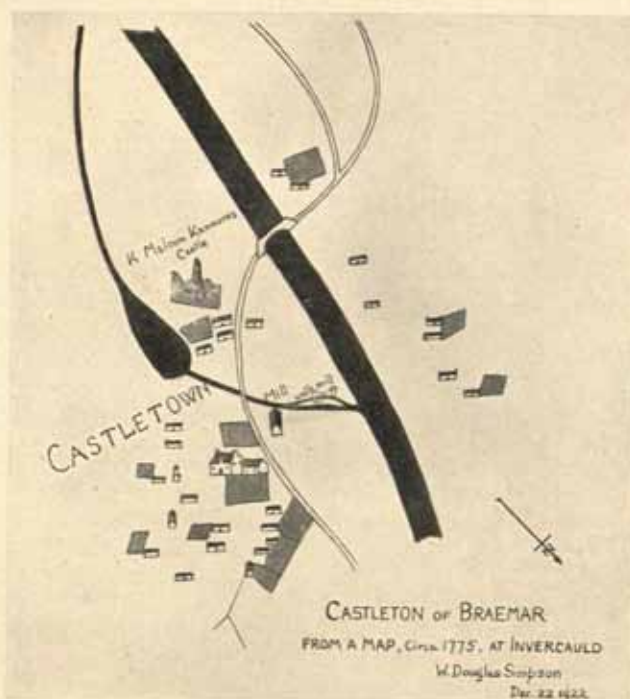


Fig. 6. Castleton of Braemar, circa 1775.

ful of cottar houses and small gardens, and one larger building, probably the "hoodhouse" or inn, or perhaps the "Courthouse," shown on a rough sketch map of 1735, preserved among the Invercauld Papers.¹ Two mills, one a waulk mill, are indicated in connection with the lade.

In the absence of architectural detail, it is not easy to form an

greatly demolished, but is said to have been a fortress and hunting-seat, at times the residence of the Kings of Scotland. Over the rivulet there is a good stone bridge of one arch, having a machine placed on the side for breaking the ice in winter, that the people may be the more readily supplied with water." Cf. the same writer's *Remarkable Ruins and Romantic Prospects of North Britain* (1785), vol. I., article "Braemar Castle," last paragraph.

¹ Reproduced in *Records of Invercauld*, ed. Rev. J. G. Michie, p. 372.

opinion as to the date of the castle. The uniform thickness and construction of the walls suggest strongly that the whole of the remains now existing belong to one period and straightforward effort of building. The plan, with its great donjon and barmekin wall, does not indicate a castle belonging to the first period of Scottish military architecture in stone and lime—the thirteenth century, or period of courtyard castles with high and thick screen walls and flanking towers. So far as it is preserved, the plan rather suggests the type of castle erected after the War of Independence, when square tower-houses with appended courtyards came into vogue. At the same time, the simplicity of the structure, the great thickness of its walls, and above all the style of masonry, indicate a date comparatively early within this period. Generally, the castle recalls the greater strongholds of the fourteenth century, such as Threave, Dundonald, or Torthorwald.¹ With such a conclusion the ascertained history of the castle fully agrees.

The Castle of Kindrochit occupied a position of much strategic importance in the Middle Ages (fig. 7). In those days, one of the great routes across the Mounth ascended Glen Clova and Glendoll and the "ladder" at Jock's Road, and, passing the *col* at Tolmount, came down on Deeside by Glen Callater and the east side of Glen Cluny. Another and also much frequented route ascended the Mounth *via* the Spital of Glenshee and Glenbeg, crossed the ridge by the Cairnwell Road, and reached the Dee valley down the west side of Glen Cluny.² At Kindrochit a bridge over the Cluny connected these two roads; and the importance of the castle, as its name (*Ceann-Drochaid*) attests, was strictly that of a bridge-head (fig. 8). These great routes across the Mounth from the south were carried northwards from Kindrochit by "a passage on the river Dee, by boate, at Castelltoun in the Brae of Mar."³ This ferry is mentioned as far back as 2nd December 1564, in the charter conveying the lands of Braemar and Strathdee to the Earl of Moray—*croftam vulgo lie Cowbill Croft cum cymba lie cowbill de Castelloun assedata pro transportatione colonorum patrie extra aquam de Dee*.⁴

¹ In general dispositions Kindrochit closely resembles Torthorwald. See the plan in *Ancient Monuments Commission, Report on Dumfries*, p. 201.

² The present road from the Cairnwell to Braemar keeps to the right bank of the Cluny, joining the Tolmount Road at the confluence of the Callater; but in ancient times the road seems to have crossed to the left bank of the Cluny, about the spot where Fraser's bridge was erected in 1750 in connection with the military road from Blairgowrie to Fort George. See G. M. Fraser, *The Old Deeside Road*, p. 90, footnote; also p. 210.

³ *Collections on the Shires of Aberdeen and Banff*, p. 77.

⁴ *Antiquities of the Shires of Aberdeen and Banff*, vol. ii. p. 88. In the sketch map of 1735 in the Invercauld Papers the ferry, and the "Boatman's hous" on the north bank of the Dee, are shown just below the mouth of the Cluny, with the comment: "Publick Ferry, and non other fitt place in the parish."

The Mounth passes have been in use from time immemorial, and it is therefore not surprising that tradition carries the origin of Kindrochit Castle back to a remote antiquity. Legend indeed asserts that both the bridge and the castle were erected by Malcolm Canmore; and the tradition is entitled to credence, since it has a pedigree which carries it far beyond these days of shifting population, tourists' handbooks, and

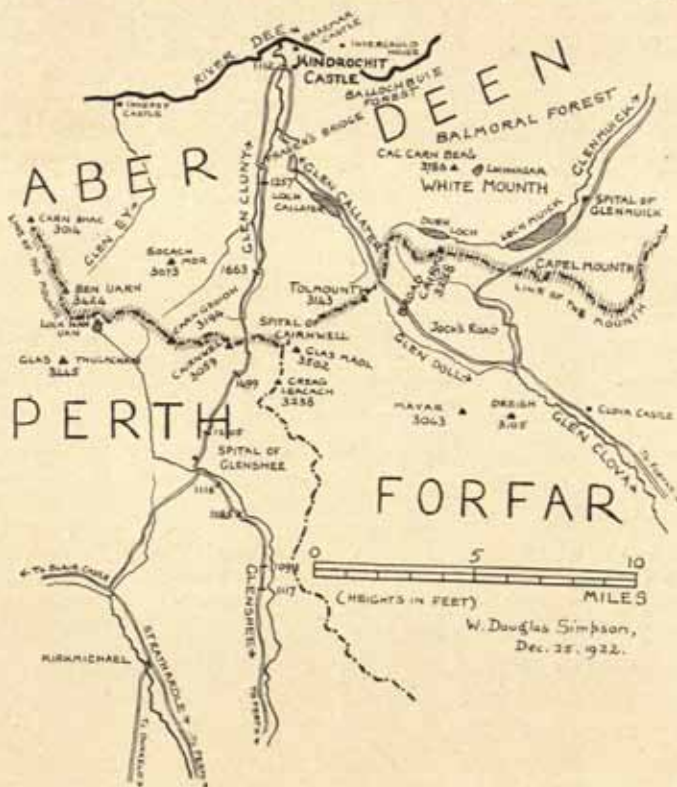


Fig. 7. Kindrochit Castle: Strategic Map.

history made to order. Sir Samuel Forbes of Foveran, in his "Description of Aberdeenshire," written in 1716-17, states that "after Malcum Cann Mor threw a bridge across the Cluny, it was called Ceann-drochit."¹ And Alexander Keith, author of a *View of the Diocese of Aberdeen*, in 1732, speaks of "the King's Castle of Kindrocht, in Castletown, now ruinous: said to have been built by King Malcolm III., and to have been inhabited

¹ *Braemar*, by the Hon. Stuart Erskine, p. 4. This note upon Kindrochit does not appear in the "Description" as printed in *Collections on the Shires of Aberdeen and Banff*, ed. J. Robertson, pp. 31-59. Several MSS. are known to have existed (see Preface, p. x.).



Photo W. Brown.]

[*Copyright.*
Fig. 8. View of Braemar from Glen Cluny. The old road to the Cairnwell is seen in front: the old road to the Tolmount ran along the skirts of the rising ground on the opposite bank of the Cluny. In the distance are the granitic "tors" of Ben Avon, "with a furr'd mist upon his snow/le head."

(as well as Kildrummy) by the Earls of Mar of the Royal family"—i.e. the Stewart Earls of Mar in the fifteenth century. The same author also enumerates our castle among nine royal strongholds in the diocese, namely, one at each royal burgh (Aberdeen, Kintore, Inverurie, Banff, Cullen), and Kildrummy, Dunnideer, Hallforest, and Kindrochit.¹ A still more interesting notice is by the "Water Poet," John Taylor, who, in the remarkable account which he has given to posterity of his visit to the "Brea of Marr" in 1618, has the following notice of Kindrochit. "I saw the ruines of an old castle, called the castle of Kindroghit. It was built by King Malcolm Canmore (for a hunting house), who raigned in Scotland when Edward the Confessor, Harold, and Norman William raigned in England: I speake of it, because it was the last house I saw in those parts; for I was the space of twelve days after, before I saw either house, corne-field, or habitation for any creature but deere, wilde horses, wolves, and such like creatures, which made mee doubt that I should never have seene a house againe." The tremendous scenery of Braemar had indeed made a powerful impression upon this Londoner. It "is a large country," he tells us, "all composed of such mountaines that Shooter's hill, Gads hill, Highgate hill, Hampsted hill, Birdlip hill, or Malvernes hill are but mole-hills in comparison, or like a liver, or a gizzard under a capons wing, in respect of the altitude of their tops or perpendicularitie of their bottomes. There I saw Mount Benawne"—Ben Avon—"with a furr'd mist upon his snowie head instead of a night cap: for you must understand that the oldest man alive never saw but the snow was on the top of divers of those hills, both in summer as well as in winter."²

As the poet tells us that he visited the ruins with "my good Lord of Marr," he must have obtained his information from the Earl himself; and we may thus infer that the tradition of Canmore's connection with Kindrochit was current at the opening of the seventeenth century in the family who owned the castle. In the face of these circumstances it is hardly possible to doubt that Malcolm Canmore did actually erect a bridge and place of strength here; though it is equally certain that no portion of the present ruins dates back to anything like so remote a period. King Malcolm was at least twice in the valley of the Dee: in 1057, when he slew Macbeth at Lumphanan, and in 1078, when he again visited the north on the same task of curbing the unruly half-Norse independence of Moravia, which was to give such trouble to all the Scottish Kings until, early in the thirteenth century, the vigorous measures of Alexander II. brought this remote province conclusively

¹ *Collections on the Shires of Aberdeen and Banff*, pp. 643-70.

² See P. Hume Brown, *Early Travellers in Scotland*, pp. 120-3.

under Anglo-Norman influence. It is more than probable that the bridge and castle on the Cluny, like other castles which afterwards sentinelled the passes over the Mounth, were erected by King Malcolm in connection with his operations against Moravia, and the need for securing communications with the more settled districts to the south.

The traditionary account of the origin of Kindrochit Castle is set forth in great fulness by the author of an interesting "Memorial Concerning a Cross Road from Inverlochy, by Ruthven of Badenoch, and Through Braemar to Aberdeen," written some time between the conclusion of General Wade's road-making activities in 1737 and the outbreak of the "Forty Five."¹

"After the total overthrow and extinction of the Pictish Nation, and the repeated expulsion of the Danes, there was nothing next to their almost perpetual Wars with England that gave such disturbance to the Scotch Kings as the frequent Commotions and Insurrections of the Turbulent Highlanders and Borderers, to suppress which they were necessitate to make frequent Expeditions in person, which sometimes proved fatal to those Princes, and very often fruitless, after considerable loss and charges, which did always terminate in the Utter devastation of the most of the Neighbouring Countries, tho' possessed by their Majesty's most loyal and peaceable Subjects.

"It was for this reason that Malcolm the 3rd, King of Scots, one of the wisest of their Princes, did build a Strong Castle in the Brae of Mar, in the very center of the Grampians, call'd the Castle of Kindrochit, and that out of pretext of a Summer Residence, for his diversion of Deer-hunting, but in effect to bridle the Stubborn disposition of the fierce and lawless Inhabitants; and more particularly the Stance of the said Fortress was pitched upon as most necessary by reason of the inaccessibleness of that Country and its central Situation, which made it always remarkable for being the Commonplace of Rendezvous of the whole Turbulent and disaffected People of those parts, there being equal expeditions access to the same in some few Days from the several remotest Corners of the Highlands, and where they could rest securely without fear of being attacked even by much superior Numbers, and the Inhabitants themselves by reason of their situation were still amongst the first and last in Arms, in all Insurrections time out of mind."

It is only another proof of the remote origin which must be assigned to these ancient routes, that the ecclesiastical history of Kindrochit carries us back to an epoch greatly anterior even to that of King Malcolm. In the legend of the origin of the Priory of St Andrews it is stated that St Regulus or Rule and his companions, in the eighth century, brought the relics of St Andrew from Constantinople to Kilrymont in Fife, the place which ever afterwards bore the name of the patron saint whose bones it then received. Proceeding northward with the relics, Regulus and his companions, says the legend, "crossed the mountains called Moneth, and reached the place then called

¹ See *Historical Papers Relating to the Jacobite Period*, ed. Colonel J. Allardyce, vol. ii. pp. 600-606.

Doldencha, but now known as Chondrochedalvan" (*transierunt montana seu Moneth, et venerunt ad locum qui vocabatur Doldencha, nunc autem dictus Chondrochedalvan*). Here they met Hungus, King of the Picts, returning from an expedition against the Scots of Dalriada; and the king, prostrating himself before the sacred relics, at once made a gift of the place to God and St Andrew. After this he accompanied Regulus and the relics, by Monichi and Forteviot, at each of which place churches were dedicated to the saint, back to Kilrymont, which was then established as the ecclesiastical capital of the Pictish kingdom.

In its present form this legend has doubtless been dressed up in Roman days for the purpose of exalting the antiquity and priority of the metropolitan see of Scotland; and Mr Archibald B. Scott, in his recent work on the Picts, has suggested that the original of the legendary St Regulus was an obscure Celtic saint, Riaghail, connected with the early ecclesiastical history of St Andrews.¹ But however garbled the story may be in its present shape, "it is impossible to doubt," as Mr W. F. Skene says, "that there is an historical basis of some kind." "The circumstantial character of the narrative," he proceeds, "is of a kind not likely to be invented. The place beyond the Moneth or Grampians, called Chondrochedalvan, is plainly the church of Kindrochit in Braemar, which was dedicated to St Andrew. Moniki is probably not Monikie in Forfarshire, as that church was in the diocese of Brechin, but a church called Eglis Monichti, now in the parish of Monifieth, which was in the diocese of St Andrews; and Forteviot was also in the diocese of St Andrews."² As Dr Reeves pointed out, Chondrochedalvan is plainly an amalgam of the name Kindrochit, "bridge-head," with Alban or Alien, an ancient name for the Cluny found often in the old charters.³ King Hungus or Ungus is clearly the forceful Pictish monarch, Angus MacFergus, who reigned from 729 or 731 to 761.⁴ He was a vigorous soldier, "a great military leader and born ruler,"⁵ who made himself, in the words of Dr Hume Brown, "virtual master of Dalriada and Strathclyde, as well as king of the Picts. Of no one before him," continues the historian, "could it be said that he came so near being overlord of North Britain; and had his work been continued by his immediate successors, North Britain might have been consolidated a century before any country of western Europe."⁶

¹ *The Pictish Nation; its People and its Church*, p. 261.

² "Notice of the Early Ecclesiastical Settlements at St Andrews," *Proc. Soc. Ant. Scot.*, vol. iv. pp. 300-21.

³ "On the Culdees," *Trans. Royal Irish Academy*, vol. xxiv. part iii. (1873), p. 258, footnote.

⁴ This is proved by Skene in his paper on St Andrews, noted above (pp. 308-9).

⁵ Scott, *Pictish Nation*, p. 389.

⁶ *History of Scotland*, vol. i. pp. 26-7.

How came this powerful Pictish monarch to be at Kindrochit when the clerical procession met him? Was there a place of strength here even at this early time, three centuries before King Malcolm? Of this we know nothing; but the cumulative evidence is irresistible that our castle has a history, as a royal residence, stretching remotely into the mists of the Celtic past. Whatever embellishment may have been added in mediæval times to the legend of St Regulus, its association of Kindrochit with this great Pictish king is a convincing proof of the high antiquity and importance of the locality.

One point more. If we agree with Skene (and of this I think there can be little doubt) that the St Andrew legend, in so far as its topographical particulars are concerned, has a substratum of truth, we glean the fact that in the eighth century Kindrochit was known not by its present name, but as Doldencha—whatever that may mean.¹ This, it will at once be noted, is in entire accordance with the statement of Sir Samuel Forbes and others that the place was called Kindrochit after Canmore threw a bridge across the Cluny.

Kindrochit, of course, lay within the territories of the ancient Celtic Mormaers of Mar; and its Church of St Andrew, for which such a distinguished pedigree is claimed by the Regulus legend, was gifted by Duncan, Earl of Mar (circa 1211–circa 1244), to the Augustinian Priory of Monymusk. The charter specifies “the Church of St Andrew of Kindrouch . . . with 1 acre of land in Aucatendregen on the other side of the stream which is called Alien.”² Aucatendregen is of course Auchendryne (i.e. *Achadh-an-Droighinn*, thorny land³), or that part of Braemar which lies on the west bank of the Cluny (anciently Alvan or Alien)—in contradistinction to the part on the east bank, which was originally a separate community, clustering round Kindrochit Castle and hence known as Castleton. The name Auchendryne is now practically obsolete, “Castleton of Braemar” being to-day the full orthodox designation of the whole village. It is said that the church alleged to have been founded by St Regulus was known as the White Church; a

¹ In regard to this word, my friend Mr F. C. Diack writes me as follows: “I have tried for it many a time when among the Gaelic people in Braemar, but the word is evidently obsolete. Such a hideous orthography as Chondroched doesn’t say much for the spelling of Doldencha. It would be possible, of course, to suggest explanations, but with the word obsolete, and no early Gaelic spelling to be had, they would remain mere guesses. Equally obsolete is the true name of the river; nothing but *Uisg Chluanaidh* to be heard.”

² “*Ecclesiam Sancti Andree de Kindrouch cum ouencionibus et oblacionibus et omnibus aliis justis pertinenciis suis et cum una acra terre in Aucatendregen ex altera parte amnis qui vocatur Alien.*”—*Registrum Prioratus Sancti Andree*, ed. Cosmo Innes, pp. 367-8, 372.

³ “The name of the place as spoken in Gaelic to-day is *Ach’an droighinn*. In this dialect final *-adh* is dropped. The full spelling is *achadh*. The meaning is ‘thorn-field.’ Aucatendregen is not a Gaelic spelling, old or new, but it isn’t far off. *Achadh* in old Gaelic means cultivated ground as opposed to untillied.”—Mr F. C. Diack.

name (*Candida Casa*) frequently found in association with old Celtic religious sites, for example at St Ninian's settlement at Whithorn. The origin of the name is explained by Mr Scott as not due to the use of stone in building the early churches (as Bede avers in the case of Whithorn), but to an importation of the name of St Martin's settlement at Tours, upon which many Celtic monasteries in Britain were modelled.¹ The site of the Church of St Andrew at Kindrochit is now occupied by the burial vault of the Farquharsons of Invercauld in the old parish churchyard.

Although the evidence is thus clear that Kindrochit has a civil and ecclesiastical history extending far back into the darkness of Celtic times, we approach daylight only with the fourteenth century. In the reign of Robert II. (1371-90), Kindrochit springs suddenly into prominence as a royal residence during the hunting season. The Register of the Great Seal contains a series of charters granted by this king from Kindrochit, and in the Exchequer Rolls are noted the expenses of the court while in residence here. Charters are dated from Kindrochit on 10th July 1373, 26th July and 26th August 1377, 4th July and 20th August 1379, 31st August 1380, and 30th August 1382 (two charters). A charter granted at "Glenshee," 27th June 1376, was doubtless executed at the Spital there during the royal progress to Kindrochit. The charter of 26th August 1377 is of particular interest, because the names of witnesses give us a glimpse of the distinguished company assembled in the royal court at Kindrochit. It is a grant of the lands of Esslemont and Arnage in Formartine to Sir William Keith, the Great Marischal, and is witnessed by William, Bishop of St Andrews; John, heir apparent (afterwards Robert III.); Robert, Earl of Fife; William, Earl of Douglas; Master John of Peebles, the King's Chancellor; and Sir James and Sir Alexander de Lindsay.² The well-known charter gifting the lands of Rubislaw in free burgage to the citizens of Aberdeen was granted by King Robert from "Kyndrocht in Marr" on 20th August 1379. This charter also is witnessed by a distinguished gathering: William, Bishop of St Andrews, and John, Bishop of Dunkeld, and Lord Chancellor; John, heir apparent, Earl of Carrick, and Seneschal of Scotland; Robert, Earl of Fife and Menteith; William, Earl of Douglas and Mar; and Sir James and Sir Alexander de Lindsay.³

In addition to these charters under the Great Seal, there is also extant

¹ *Pictish Nation*, p. 78; also the same writer's *St Ninian, Apostle of the Britons and Picts*, pp. 42-3.

² See *Registrum Magni Sigilli*, 1306-1424, pp. 98-9, 131, 143, 148, 164, 165, 171.

³ *Charters and other Writs relating to the Burgh of Aberdeen*, ed. P. J. Anderson, pp. 19-21.

an interesting precept, dated "at Kindrocht in Marre," 29th August 1378, conveying a yearly pension of 20 *solidi* out of the burghal rents of Aberdeen to the poet John Barbour.¹

The Exchequer Rolls contain frequent notices of expenses incurred by the king while hunting at Kindrocht. They are entered under the Accounts of the Clerk of Liverance, who controlled the provisions supplied to the royal household. Entries of such outlays are noted under the years 1371, 1376, 1379, 1380, 1381, 1382, 1384, 1387, and 1388. Usually there is a bare entry without specification, but in 1381 and 1384 £65, 3s. 8d. and £69, 13s. 4d. are paid to Robert Rolloc, baker, the latter entry being in reference to expenses incurred in Glenconglas² as well as at Kindrocht. In the former year there is also an entry for 53s. 4d. for the carriage of one jar (*dolium*) of wine sent to Kindrocht for the King's use.³

Thomas, last Earl of Mar in the old Celtic line, died in 1374. He was succeeded by his sister Margaret, married to William, first Earl of Douglas, who (as we saw) witnessed two royal charters granted at Kindrocht in 1377 and 1379. This earl was a mighty warrior against the "auld enemy" both in his own marchlands and in France, where he suffered hurt at Poitiers (19th September 1356). Their son James, Earl both of Douglas and of Mar,⁴ was slain in the moment of triumph at Otterburn (19th August 1388). He was with his mother at Kildrummy Castle on 15th August 1384, when his seal was affixed to a writ by her conferring a grant of land on the Chapel of the Virgin Mary in the Garioch.⁵ As the Exchequer Rolls show that King Robert was at Kindrocht then, doubtless Douglas was in attendance upon his royal master. This shifting of the centre of political gravity across the Mounth to Kindrocht is interesting when we reflect that the arrangements for the campaign of Otterburn were matured at a conference of barons, unknown to the King, held in Aberdeen.

"The dead Douglas who gained the field" was succeeded by his sister Isabella, who entered into possession not only of the earldoms of Mar and the Garioch, but also of the vast Douglas estates. Countess Isabella

¹ *Registrum Episcopatus Aberdonensis*, ed. Cosmo Innes, vol. i. pp. 129-30. Cf. *Exchequer Rolls*, vol. iii. (1379-1406), p. 25.

² The water of Conglass flows north-westward through a narrow glen in Kirkmichael Parish, Banffshire, joining the Avon below Tomintoul.

³ See *Exchequer Rolls*, vol. ii. (1359-79), pp. 364, 543; vol. iii. (1379-1406), pp. 25, 45, 51-2, 68-9, 80, 90, 113, 147, 177.

⁴ An interesting memorial of this connection between the two great houses of Douglas and Mar may be seen to-day at Lincluden College, where one of the heraldic shields in which the ruins of this beautiful building abound bears the Mar arms (a bend between six crosslets fitchée) quartered with those of Douglas (a heart, on a chief three stars).

⁵ *Antiquities of the Shires of Aberdeen and Banff*, ed. J. Robertson, vol. iv. p. 724.

married Sir Malcolm Drummond, brother-in-law of Robert III., and, according to Wyntoun,

"A manfull knyecht, bathe wise and war."¹

On 10th November 1390 King Robert at Methven granted a special licence to "our dear brother Malcolm de Drommond, Knight, to build a tower or fortalice on the lands of Kyndrocht with their pertinents in the Earldom of Mar."² There can be no doubt that it was subsequent to this licence that the powerful oblong tower was erected; and having regard to the exact similarity in masonry and general characteristics of the structure, I am strongly disposed to assign the rest of the existing ruins to about the same date. Undoubted castles of the fourteenth century are somewhat rare in Scotland, and the known date of this one, despite its destroyed condition, makes it of special value as a standard for comparative purposes. In this connection one turns instinctively to the monumental volumes of MacGibbon and Ross, which will always remain the foundation of patient and solid work upon which all students of Scottish architecture must build. From these volumes I have collated the annexed table (fig. 9) of 60 rectangular towers (including Kindrocht) assigned to the fourteenth and fifteenth centuries.³ The detailed figures and the average speak for themselves; and it will be perceived that the tower at Kindrocht is the fifth largest for area in Scotland. It has been one of the grandest and strongest keeps in the country, and the complete demolition of this exceptionally powerful structure is very greatly to be regretted.

In 1402, while engaged upon the construction of his tower at Kindrocht, Sir Malcolm Drummond was attacked by a band of unknown ruffians, and so mishandled that shortly he died.⁴ This outrage was supposed to have been instigated by Alexander Stewart, a natural son of the terrible Wolf of Badenoch. At any rate, in 1404, Stewart with a band of caterans stormed Kildrummy Castle, where Drummond's widow, Isabella, Countess of Mar, was residing, and, forcing her to marry him, established himself as Earl of Mar. By this surprising metamorphosis, "from a rude and ferocious freebooter he became one of the ablest captains and most experienced statesmen in the nation."⁵

¹ Wyntoun's *Original Chronicle*, ed. F. J. Amours, vol. vi. p. 403.

² "Sciatis quod concessimus dilecto fratri nostro Malcolmo de Drommond militi licenciam nostram specialem ad edificandum turrem siue forsetum in terris de Kyndrocht cum pertinenciis infra comitatum de Marre."—*Antiquities of the Shires of Aberdeen and Banff*, vol. iv. p. 162. The original document is stated to be at Drummond Castle.

³ In this list should have been included the famous tower of Cawdor, the licence for which was granted in 1454. It is 45 feet in length by 34 feet in width, and the walls are 11 feet thick.

⁴ See W. Watt, *History of Aberdeen and Banff*, p. 79.

⁵ Dr J. Longmuir, *Speyside*, p. 141.

SCOTTISH RECTANGULAR TOWERS

XIVTH & XVTH CENTURIES

COLLATED FROM MACGIBBON AND ROSS

NO	NAME OF CASTLE	LENGTH	BREADTH	THICKNESS OF WALLS	AREA	SIZE
1	DUNDONALD	81 FT. 8 IN.	40 FT.	7 FT. 6 IN. - 9 FT.	3266 SQ. FT.	9692 IN.
2	CRAIGNETHAN	70 FT.	54 FT.	8 FT. 6 IN.	3780 SQ. FT.	I
3	CARRICK	69 FT.	37 FT.	6 FT. 6 IN.	2583 SQ. FT.	VIII
4	NEWARK	65 FT.	40 FT.	10 FT.	2600 SQ. FT.	VII
5	COEFFIN	65 FT.	35 FT.	8 FT.	2275 SQ. FT.	XII
6	KINDROCHIT	64 FT.	43 FT.	10 FT.	2787 SQ. FT.	V
7	ALLOA	63 FT. 6 IN.	42 FT.	10 FT.	2667 SQ. FT.	VI
8	DUART	63 FT.	40 FT.	10 FT. - 15 FT.	2838 SQ. FT.	III
9	SPYNNIE	62 FT. 5 IN.	44 FT. 3 IN.	10 FT. 6 IN.	2761 SQ. FT.	IV
10	THREAVE	61 FT.	38 FT. 4 IN.	8 FT.	2349 SQ. FT.	XI
11	CASSILIS	60 FT.	40 FT.	12 FT. - 13 FT.	2400 SQ. FT.	X
12	ELLANDONAN	57 FT.	43 FT.	10 FT.	2451 SQ. FT.	IX
13	LENNOX	57 FT.	35 FT. 2 IN.	7 FT. 6 IN.	1890 SQ. FT.	XVI
14	TORTHORWALD	56 FT. 6 IN.	39 FT. 2 IN.	9 FT.	2212 SQ. FT.	XIII
15	DEANE	54 FT.	37 FT.	9 FT.	1998 SQ. FT.	XIV
16	DRUMIN	53 FT.	38 FT.	7 FT.	2014 SQ. FT.	XVII
17	DRUM	52 FT.	39 FT.	12 FT.	2028 SQ. FT.	XVI
18	BALTHAYOCK	52 FT.	37 FT.	NOT STATED	1924 SQ. FT.	XX
19	COVINGTON	51 FT.	40 FT.	11 FT.	2040 SQ. FT.	XXV
20	CATHCART	51 FT.	30 FT. 9 IN.	7 FT.	1568 SQ. FT.	XXX
21	ELPHINSTONE	50 FT. 5 IN.	35 FT.	8 FT. 6 IN.	1764 SQ. FT.	XXII
22	ELLANSTALCAIRE	50 FT.	40 FT.	9 FT.	2000 SQ. FT.	XXIII
23	WILCHURN	49 FT.	35 FT.	7 FT.	1715 SQ. FT.	XXIII
24	COMLONDAN	48 FT. 10 IN.	42 FT. 7 IN.	11 FT.	2079 SQ. FT.	XIV
25	MAOIL	48 FT. 6 IN.	35 FT.	9 FT.	1697 SQ. FT.	XXIV
26	ACKERGILL	48 FT.	34 FT.	9 FT. - 10 FT.	1632 SQ. FT.	XXV
27	REDCASTLE, LUNAN BAY	48 FT.	34 FT.	7 FT.	1632 SQ. FT.	XXV
28	HALLFOREST	48 FT.	30 FT.	7 FT.	1440 SQ. FT.	XXV
29	CRICHTON	46 FT. 6 IN.	35 FT. 8 IN.	7 FT. 4 IN.	1565 SQ. FT.	XXVI
30	GLENGARNOCK	45 FT. 6 IN.	35 FT. 6 IN.	7 FT.	1615 SQ. FT.	XXVII
31	CLOSEBURN	45 FT. 6 IN.	34 FT. 6 IN.	10 FT.	1509 SQ. FT.	XXIX
32	SNEYN	45 FT.	36 FT.	7 FT.	1620 SQ. FT.	XXXI
33	MEARNAG	44 FT.	30 FT.	8 FT.	1320 SQ. FT.	XLI
34	MEARNIS	44 FT.	29 FT. 6 IN.	8 FT.	1298 SQ. FT.	XLI
35	BALDONIE	43 FT. 9 IN.	34 FT. 9 IN.	9 FT.	1520 SQ. FT.	XXXII
36	CAMPBELL	43 FT.	31 FT.	7 FT. 6 IN.	1335 SQ. FT.	XL
37	CARDONESS	42 FT. 11 IN.	31 FT. 11 IN.	7 FT.	1369 SQ. FT.	XXXVIII
38	KILBURNIE	42 FT.	32 FT. 7 IN.	7 FT. - 8 FT.	1368 SQ. FT.	XXXIX
39	BADENHEATH	42 FT.	30 FT. 6 IN.	6 FT. - 7 FT.	1281 SQ. FT.	XLV
40	CRAIGNEIL	42 FT.	30 FT.	6 FT.	1260 SQ. FT.	XLVI
41	CRAIGNISH	41 FT. 9 IN.	33 FT. 6 IN.	7 FT. 6 IN.	1398 SQ. FT.	XXXVII
42	URQUHART	41 FT.	36 FT.	8 FT. - 9 FT.	1476 SQ. FT.	XXXIII
43	MAINS, KILMARNOCK	40 FT.	38 FT.	7 FT. - 8 FT.	1820 SQ. FT.	XLII
44	GUTHRIE	40 FT.	31 FT.	5 FT. - 6 FT.	1240 SQ. FT.	XLVII
45	FALSIDE	39 FT. 4 IN.	30 FT. 7 IN.	7 FT.	1202 SQ. FT.	XL
46	BRAL	39 FT.	34 FT.	8 FT. - 10 FT.	1404 SQ. FT.	XXXVI
47	DUNOLLY	39 FT.	37 FT.	9 FT.	1463 SQ. FT.	XXXV
48	LOCHLEVEN	38 FT. 6 IN.	32 FT.	7 FT. - 8 FT.	1232 SQ. FT.	XLVIII
49	SAUCHIE	38 FT.	34 FT.	6 FT.	1292 SQ. FT.	XLIV
50	KILRANOCK	38 FT.	31 FT.	7 FT.	1178 SQ. FT.	LI
51	BENHOLM	38 FT.	29 FT.	6 FT.	1102 SQ. FT.	LII
52	SKIPPES	36 FT. 3 IN.	32 FT. 10 IN.	6 FT.	1191 SQ. FT.	LII
53	CLACKMANNAN	36 FT.	30 FT.	6 FT.	1080 SQ. FT.	LIV
54	LIBERTON	36 FT.	26 FT.	5 FT.	936 SQ. FT.	LV
55	LOCH ORE	35 FT. 6 IN.	34 FT.	9 FT.	1207 SQ. FT.	XLIX
56	BURLEIGH	32 FT. 5 IN.	27 FT. 2 IN.	5 FT.	880 SQ. FT.	LVI
57	BREACACHA	32 FT.	27 FT.	7 FT.	864 SQ. FT.	LVI
58	CARLETON	31 FT.	25 FT.	6 FT.	775 SQ. FT.	LXII
59	KILMULL	29 FT.	27 FT. 8 IN.	6 FT.	802 SQ. FT.	LXIII
60	KILDONAN	28 FT. 5 IN.	22 FT.	6 FT.	625 SQ. FT.	LX
AVERAGE		47 FT.	34 FT. 10 IN.	8 FT.	1638 SQ. FT.	

NOTES

- (1) TOWERS ARE ARRANGED IN DESCENDING ORDER OF LENGTH, AND WHERE LENGTHS ARE EQUAL, OF BREADTH.
 (2) WHERE THICKNESS VARIES, AN AVERAGE HAS BEEN TAKEN TO WORK OUT THE GENERAL AVERAGE.
 (3) FRACTIONS OTHER THAN $\frac{1}{2}$ HAVE BEEN COUNTED AS THE NEAREST WHOLE.

W. DOUGLAS SIMPSON
 Dec. 23-2, 1922.

Fig. 9. Table of Scottish Rectangular Towers.

He was a man of varied interests, which ranged from horse-breeding¹ to piracy. In connection with his activities in the latter direction, Dr Th. A. Fischer, in his work on *The Scots in Germany*,² has some interesting particulars. "In Scotland, as in other countries," he writes, "men of the highest rank took part not only in trading beyond the seas, but also in the more fascinating enterprise of procuring booty at sea by force, an enterprise which they considered, as their forefathers did before them, a legitimate field of knightly prowess and adventure. Prominent in this respect is the Earl of Mar in the beginning of the fifteenth century. Once he had with his companion Davidson³ taken a Prussian *Kraier* (small ship) on her voyage to Flanders and later on tried to sell the goods at Harfleur, where, however, they had been arrested by Hanseatic merchants. The Parliament of Paris refused the handing over of these goods to the proper owners on account of letters of safe-conduct granted to the Scotsman. Moreover the Earl of Mar, Alexander Stewart, excuses himself in a letter written at Aberdeen and addressed to Danzig, saying that not he but Dutch fishermen had committed the deed (1410). He even threatened a feud and did not hesitate in the following year to put his threats into execution. Again the inhabitants of Danzig, or Danskin as it is invariably written, had to suffer most. One of their skippers, named Claus Belleken, who was about to carry a load of salt, flour and beer from Rostock to Scotland, was attacked by the people of the Pirate-Earl on the 6th of June, 1412, near Cape Lindesnaes. They threatened to throw him overboard, but relented and finally permitted him to escape in a boat with three of his men. The rest of the crew were taken prisoners and *carried to Scotland, where they were employed in carrying stones for the building of a castle in the interior of the country*.⁴ Two men, Tideman von der Osten and Hanneke Schole, made good their flight and arrived home safely by way of Flanders."

What was this castle of the Earl of Mar which in 1412 was built by the forced labour of Claus Belleken's captured crew? Bearing in mind that Sir Malcolm Drummond was engaged in the erection of Kindrochit Castle when he was murdered in 1402, I think it is highly probable that Stewart was continuing his victim's work when the capture of the Danzig mariners placed an opportune supply of labour in his hands. If this is so, it is indeed remarkable that the castle in the wilds of

¹ It is recorded that he "brocht out of Ungary in Scotland sindry gret hors and meris, to spreid the cuntre be thair generatioun. Thus was the cuntre, within few yeris eftir, fillit ful of gret hors: howbeit, afore his time, was nocht but small naggis in this realme."—J. Bellenden, *Croniklis of Scotland*, ed. 1821, vol. ii. p. 508.

² Pp. 5-6.

³ This is Robert Davidson, Provost of Aberdeen, who fell at Harlaw, 24th July 1411. The Provost and the Earl of Mar were on intimate terms.

⁴ The italics are mine.—W. D. S.

western Aberdeenshire should have been in part erected by men from the remote province of East Prussia.

The subsequent history of the castle is involved in the shifting fortunes of the earldom of Mar. On Stewart's death in 1435 the earldom was annexed to the Crown, in spite of the claims of Sir Robert Erskine, the nearest heir of Countess Isabella. To advance these claims we find Erskine making bargains with certain Aberdeenshire gentry, offering them lands in the earldom if they would assist him to obtain it. Thus, on 26th June 1439, Sir Robert Erskine, styling himself Earl of Mar, grants to Sir Alexander Forbes of that ilk half the lordship of Strathdee. The other half had been similarly granted to Robert Lyle of Duchal; and, accordingly, these two grantees entered into an indenture made at Perth on 26th March 1444, the tenor whereof runs as follows: "It is accordit at the forsaid Robert the Lyil has geffyn and sale gyff to the forsaide Schir Alexander herettably ale and haille his part of the landis of Stradee and Kyndrocht with his part of the castale of the samyn lands with all thar pertinence, to be haldyn of the said Robert in blanche ferme; and gyff hyme charter and possession als son as it likes the saide Schir Alexander efter at the saide Robert sal recover possession of halfe the landis of Mar liande in the schirrefdome of Aberden."¹ Of course these contracts were never implemented, for the Crown continued to retain the earldom of Mar in its own hands or those of its nominees. The wardenship of Kildrummy and Kindrocht Castles, sometimes together and sometimes apart, was bestowed on a variety of personages, and between 1451 and 1484 frequent entries connected with Kindrocht appear in the Exchequer Rolls. They include payments of salary to the warden of the castle—Alexander Stewart of Strathdee, Lord Glammis, and the Master of Huntly appearing successively in this office; rents drawn from the demesne lands; and occasionally special items, such as a payment of £10 in 1438 for the pasture of the King's horses, or an unspecified amount paid in 1464 to Master John Lyounne "for expenses incurred hunting at Kindroch on the King's request the year the King died."²

In all these records of the fifteenth century mention is regularly made of Kindrocht Castle. In the fourteenth-century notices, on the other hand, we find no mention of the castle as such, the place-name being noted without any specification. This circumstance confirms the

¹ *Antiquities of the Shires of Aberdeen and Banff*, vol. iv. pp. 190-1, 194, 393.

² *Exchequer Rolls*, vol. v. (1437-54) pp. 57, 460, 464, 517, 525, 600, 656; vol. vi. (1455-60) pp. 70, 269, 361, 436, 515, 529, 650, 663; vol. vii. (1460-9) pp. 86, 87, 277, 353, 412, 462, 559; vol. viii. (1470-9) p. 80; vol. ix. (1480-7) p. 281. From the accounts of 1471 it appears that during his brief tenure of power, Robert, Lord Boyd, had wrongfully let the Mains of Kindrocht to John Malcomesone at half the due rent.

view that the stone fortress is all subsequent to Sir Malcolm Drummond's licence of 1390. The earlier building which Robert II. used as a hunting-lodge may have been a structure of a more primitive kind—perhaps one of those “peels” or stockaded enclosures which figure so largely in the Wars of Independence. In the fifteenth century Kindrochit Castle was the chief messuage of the lordship of Braemar; the other divisions of the Mar earldom, with their messuages, being the lordships of Cromar (Migvie Castle), Strathdee (Aboyne Castle), Midmar (Midmar Castle), and Strathdon (Doune of Invernochty).¹ All these castles existed in the thirteenth century.

The later history of the castle is obscure, and there appears to be no contemporary record of when and under what circumstances it was finally abandoned. But in the “Memorial Concerning a Cross Road,” already referred to, we are very circumstantially informed that “this Castle and Fortress of King Malcom's was of great use for many Ages, for keeping the peace of that and the Neighbouring Countries, until neglected and let out of repair in the Reign of King James the 5th, and at last fell to total ruin and in Rubbish about the beginning of the Reign of K. James the 6th.”² Its modern successor may be accounted the present Castle of Braemar; but there is an evident hiatus in continuity, for we have seen that Kindrochit Castle was already in ruins at the date of Taylor's visit in 1618, while the Castle of Braemar was not erected until 1628, as we learn from the “Memorial Concerning a Cross Road,” wherein it is stated that “in the year 1628, the 3 year of the reign of King Charles the 1st, John Erskine, Earl of Mar, built a new Strong Castle (with Iron Gates and barr'd Windows) within a furlong of the Ruins of King Malcom's, designed for a hunting seat for his family.”³ The house of the Earl of Mar's at which Taylor stayed must have been some building intermediate between the desertion of Kindrochit and the erection of the present Braemar Castle.

At Edinburgh, on 22nd March 1634, King Charles I. confirmed a very

¹ See my paper on this castle in *Proceedings*, vol. liii. pp. 34-45.

² *Historical Papers relating to the Jacobite Period*, vol. ii. p. 602.

³ *Ibid.* On the other hand, the Rev. Charles M'Hardy in the *Statistical Account*, 1795, vol. xiv. p. 350, states that the castle was built by the Erskines after they were reinstated in the Mar earldom in 1565. “About the end of Queen Mary's reign, these lands were excambied with the Earl of Marr for the lands of Monaltry, and soon after his accession to the estate, he built the present house.” But in support of the Memorialist we have the “View of the Diocese,” 1732 (*Collections on the Shires of Aberdeen and Banff*, p. 643), which says that the castle was built by “John, Earl of Mar, grandfather to the present John, Duke of Mar”—the attainted leader of the “Fifteen”; also Pennant, who in his *Tour in Scotland*, 1769 (3rd ed., 1774, p. 113), describes the castle as “a square tower, built about a hundred and fifty years ago.” If the Erskines, after their accession to the Mar estates in 1565, did build a house of some kind in Braemar, this would have been the place where Taylor stayed in 1618, 10 years before the present castle was built.

interesting charter by John, Earl of Mar, Lord Erskine and Garioch, of certain lands in Glengairn to Sir Alexander Irvine of Drum, dated at Edinburgh Castle 6th and 13th July 1633. The *reddendo* is "payand yeirlie to ws at our present duelling hous in the Brae of Mar callit the castell of Kindrocht 25 merkis; and doubleing the same soume the first yeir of the entrie of ilk heir; and als payand yeirlie at the said castell

6 pultrie foullis, and winning and laying in yeirlie 10 loadis of peattis to the said castell befor the feist of Lambas, and the half of ane long carriadge of ane horse yeirlie not exceiding the distance of thrie scoir mylles fra the said castell as the samyne sall be requyrit." Irvine is also bound to appear, personally or by proxy, "in thrie head courtis at the said castell," and is directed to supply four men and hounds when required by the Earl for hunting purposes, and to put up "lunkardis" and make "tinschellis" for this purpose. In this charter the ancient name Kindrocht Castle, as the place where feudal services were wont to be rendered, is clearly applied to the more modern Castle of Braemar.¹ This castle (fig. 10) is a turreted



[Photo J. Dee.

Fig. 10. Braemar Castle from S.

house on the ordinary L-plan, with a stair tower in the re-entrant angle. It was burned by John Farquharson of Inverey—"the Black Colonel"—in 1689, to prevent it falling into the hands of General Mackay, and remained a roofless ruin until 1748, when it was leased by the Government and turned into a military post for suppressing Jacobitism. At

¹ *Registrum Magni Sigilli*, 1634-51, No. 90. "Lunkardis" and "tinschellis" are both explained by Taylor in his delightful account of the great hunt which he attended in 1618. The former are "small cottages built on purpose to lodge in . . . the kitchen being alwayes on the side of a banke, many kettles and pots boyling, and many spits turning and winding, with great variety of cheere," of which there is a surprising enumeration, culminating in "most potent *Aquavita*." The "Tinckhell" are thus described: "Five or sixe hundred men doe rise early in the morning, and they doe disperse themselves divers wayes, and seven, eight or tenne miles compasse, they

that date the interior was much altered, the upper part of the castle rebuilt with plain large chimneys and ginger-bread battlements, and the whole surrounded by the loopholed wall, with a salient on each face, precisely similar to the wall built at the same date round Corgarff Castle in Strathdon.

In its present condition the fine Castle of Braemar is a building of remarkable picturesqueness, which attracts widespread interest among the thousands who annually visit the capital of the Deeside Highlands. On the other hand, little or no attention is paid to the neglected ruins of the far older Castle of Kindrochit, and many visitors come and go without even learning its existence. Yet what I have been able to glean, in regard to the building and its history, is sufficient to prove its great importance, both as a powerful fortress and as a royal residence dating from remote antiquity. Scanty though its remains may be, it amply warrants the claim, put forward on its behalf by a recent writer, to be "the most distinctive historical possession of the whole upper valley of the Dee."¹

In preparing this paper I have enjoyed much assistance, which I gratefully acknowledge, from a number of willing friends. Mr R. D. Bruce, Mr J. L. Duncan, and Mr E. Duthie kindly helped with the difficult task of surveying the chaotic ruins. Colonel A. H. Farquharson of Invercauld; Mr A. Smith, Factor, Invercauld Estates; Rev. W. Todd U.F. Manse, Braemar; and Miss Clark, Rowan Cottage, Castletown, placed their local knowledge freely at my disposal. Dr W. Kelly supplied information and advice upon various points, and Mr F. C. Diack gave me assistance in matters of Gaelic topography. Mr J. E. Smith helped me in preparing the table of rectangular towers. I have also to thank my friends, Mr R. M. Clark and Dr W. Brown, for permission to reproduce their beautiful photographs, and the Aberdeen Natural History and Antiquarian Society for the loan of the blocks for figs. 2 and 8.

doe bring or chase in the deere in many heards (two, three, or foure hundred in a heard)," Cf. Scott, *Lady of the Lake*, Canto vi. xvii.:

"We'll quell the savage mountaineer
As their Tinchel cows the game";

and his note thereon: "A circle of sportsmen, who, by surrounding a great space, and gradually narrowing, brought immense quantities of deer together, which usually made desperate efforts to break through the *Tinchel*."

¹ Fraser, *Old Deeside Road*, p. 231.

IV.

DISCOVERIES IN NORTH-WESTERN WIGTOWNSHIRE: CINERARY URN AND INCENSE-CUP AND PERFORATED AXE-HAMMER; MOULD FOR BRONZE-WINGED CHISEL; WHETSTONE FOR STONE AXES; CUP-MARKED ROCKS AND BOULDER; APRON OF MOSS FIBRES. By LUDOVIC M'L. MANN, F.S.A.Scot.

About 1907 Mr William Kennedy of Low Glengyre, Kirkcolm Parish, Wigtownshire, picked up on his farm, on a field called Eldrig, a small, finely made perforated axe-hammer measuring only 2·7 inches in length (fig. 2), of very hard greenish volcanic stone, with two thin veins of white quartz running obliquely across it.

About 1918 he discovered lying on a field called Fey-more, on the same farm, half of a sandstone mould used for casting an object something like a bronze palstave without a loop.

In the spring of 1922 Mr Kennedy carefully scrutinised the place where the axe-hammer was found. The ground, after having lain fallow for some years, was being ploughed, and he discovered traces of a burial, which he did not disturb, but preserved by placing over it pieces of turf. He then wrote me suggesting I might visit the spot, which I did on 27th and 28th May following, when the field was being harrowed.

The field rises in a gently undulating style to a height of 333 feet, and the burial in question was practically at the highest point of the hill, about 1660 feet south of the farm steading.

What Mr Kennedy had seen was the upper part of a cinerary urn set upright, of which the plough had torn off the rim portion (fig. 1). I dug carefully into the place with a penknife, and found that a small circular excavation about 24 inches in diameter, which was now full of dark soil, had been made in ancient times. Its depth is not certain, as the original surface had been much disturbed, not only recently, but on previous occasions when the field was being worked. The cavity went down through hard reddish sub-soil to the living rock, about 18 inches under the present grass level.

It was seen that into the hole had been placed on its base a cinerary urn, which was nearly full of small pieces of cremated bones and wood char, matted together by the hairy roots of the grass. Fragments of burnt bones and char were also seen round about the urn. Perhaps most of these bones had been scattered from the inside of the urn when the rim was shattered; but some large lumps of charcoal about 1½ inch square were set, as if intentionally, round the outside of the vessel.

Working carefully into the cavity, we saw that another pottery vessel, much smaller and apparently containing a very small quantity of bones and fragments of char, was placed on its base, just outside the larger vessel (fig. 1).

Several stones had been placed round the edge of the ancient excavation, and some close to the urns as if to secure them in position. These were numbered and their position carefully noted. The stones were then

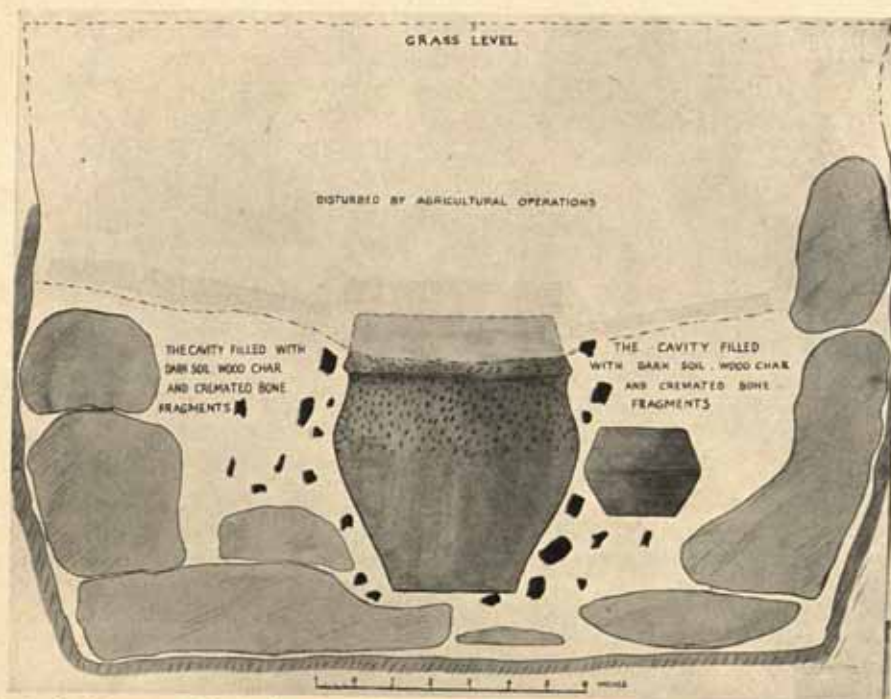


Fig. 1. Section across the cavity containing Cinerary and Incense-cup Urns at Low Glengyre.

taken to Glasgow with specimens of the soil, so that they could, if it were wanted, be used in a reconstruction of the burial.

Measurements of the relative positions of the two urns were taken by prismatic compass, both by reading the compass on and well above the ground.

A line from the centre of the larger to that of the smaller urn bore 330° east of north magnetic when the compass was on the ground, but 321° when the compass was read at a height above the ground, the difference being accounted for by some magnetite in the rock.

A thumb-nail scraper of flint and two small splinters of flint, all fire-

injured, were found in the dark soil of the cavity. The place where the two urns were deposited has been marked by setting two white quartz stones beneath the level of the plough's interference. In fig. 1 is shown a section across the site.

The axe-hammer was found at a spot 31 feet from the centre of the larger urn and at a bearing from that centre of 69° east of north magnetic, the reading being taken with the compass well above the ground.

It seems likely that on the top of this hill had once been a cairn now entirely demolished. The smaller vessel is quite plain and without perforations, and it is shaped like two truncated cones set base to base. It is 23 inches high, with an outside diameter at the rim of 2·2 inches, a diameter at the middle of 3 inches, and has a flat base 1·75 inches in diameter. It is of the type usually and fancifully styled "incense-cup." An urn, identical, except that it has one or two slightly incised lines of decoration, was found in Yorkshire, and is in the British Museum.

The larger urn is of the flower-pot type with overhanging rim, but of smaller dimensions than is usual in this class of pottery. Part of the top is broken off and the fragments could not be found. When complete, its height would probably be about 7½ inches. At the neck under the overhanging rim it measures 5·8 inches in external diameter, at the widest part 6·5 inches, and at the base 3·2 inches, while the wall is only ¼ inch thick.

The decoration beneath the overhanging part consists of indentations each in the shape and of the size of a grain of wheat, spasmodically set, and made before the clay was hardened by fire. On the higher part of the urn are groups of indentations, made, however, by sets of smaller oval objects ranged like grains on a stem.

The burnt osseous fragments were found to be very much decayed and mixed with black earth and char. This mixed material was put in a box on the spot and taken to Glasgow, where it was carefully sifted and all the osseous fragments separated. It would appear, however, that many of the pieces of bone, owing to disturbance of the surface of the ground, have disappeared, and, like the upper portions of the urn, are irrecoverable.

Dr Thomas H. Bryce states that "from the characters of the fragments as a whole only one skeleton is represented, and it is that of a child. No fragment can be attributed to an infant, that is certain—but all the bones may be those of a child. The bits of small bones are thin. There are fragments of epiphyses, and the long bones are represented by pieces of the shafts, in which the hard outer shell is thin and the marrow cavity is large. A portion of the astragalus shows that that bone was already of the size seen in later years of childhood. There are portions

of the fangs of two teeth. These cannot be fangs of milk teeth from certain characters, and although it is difficult to be certain, I believe they must be taken as fangs of bicuspid teeth. Now these erupt between 10 and 12 years of age, and the fangs are not fully developed at first. I conclude, therefore, that the individual represented was probably a young person in the later years of childhood—certainly over 8, probably over 12.

"One thing is certain, that the incense-cup cannot have been provided—so far as the evidence of the bones recovered goes—for an infant."

Such small cup-shaped urns are often found perforated, but the larger intimately associated urns have unpierced walls. It has been generally understood that in many cases in which the position of the smaller urns in relation to the larger has been ascertained, the smaller vessel was found within the larger, and that where the contents of the smaller vessel have been determined, they have been found to be the cremated bones of an infant. It will, however, be seen that this most valuable and interesting discovery at Glengyre permits of a suggestion going more deeply into the problem.

It has been thought by some that the perforations, which are so very often characteristic of the smaller vessels, indicate that these miniature pots were used suspended for the carrying of incense; but this idea has in recent years been given up. Indeed, the Glengyre smaller vessel appears to have been, like its larger companion, a true receptacle for incinerated osseous remains. No reasonable explanation has so far been offered as to why the smaller vessel should have been so often perforated while the larger one was not, and why on occasion the smaller urn was not perforated. It is found that in some cases the perforations of the smaller vessel are only on one of its sides. This seems to rule out the idea that these vessels were suspended.

Another theory which has been put forward is that the perforations were made to assist combustion; but this hypothesis is unlikely, as cremation was performed before the ashes were placed in the vessel. I would suggest that the smaller urns were solely used as cinerary vessels, and that the perforations were intended to permit in some way of the spirit of the young person keeping in touch with that of the mother.

It is not unlikely that the perforated small urn set inside the larger was associated with the burial of a mother and young infant, and that in the case of a mother and older child dying together, the small urn was made imperforate and was set outside the larger vessel.

In the Glengyre case, owing to the small number of osseous fragments recovered, it cannot be stated whether the sepulchre is that of a mother as well as of a child, but it is known that the child had grown out of the stage of infancy.



Double burials in immediate juxtaposition, accompanied by a large cinerary vessel and a very small one, are exceedingly rare on the Continent. Several scores of them have been found in Scotland, England, Ireland, and the Channel Islands. It is by careful examination of relics in their original position (as well as their close scrutiny afterwards) that a knowledge of religious beliefs and burial customs of the prehistoric periods may be extended.

AXE-HAMMER HEADS.

The small size of the Glengyre axe-hammer (fig. 2) and the absence of any sign of wear upon it strengthen the belief that these objects were used not for utilitarian but for ceremonial or ritualistic purposes. It



Fig. 2. Stone Axe-hammer from Low Glengyre, Wigtownshire. (†)

has been made of an ornate stone, a piece chosen because of the white quartz veins which show up well against the dark green background of volcanic stone. It shows no sign of wear. The labour involved in cutting it out from a very hard stone must have been considerable. It was evidently a treasured object. It is so small as to be of no practical use. The shaft of the hammer, judging from the diameter of the perforation of the head, was very slightly thicker than an ordinary lead

pencil, measuring only .45 inch. The axe-hammer may have been symbolical, ritualistic, or ceremonial, and, like the freemason's mallet, more

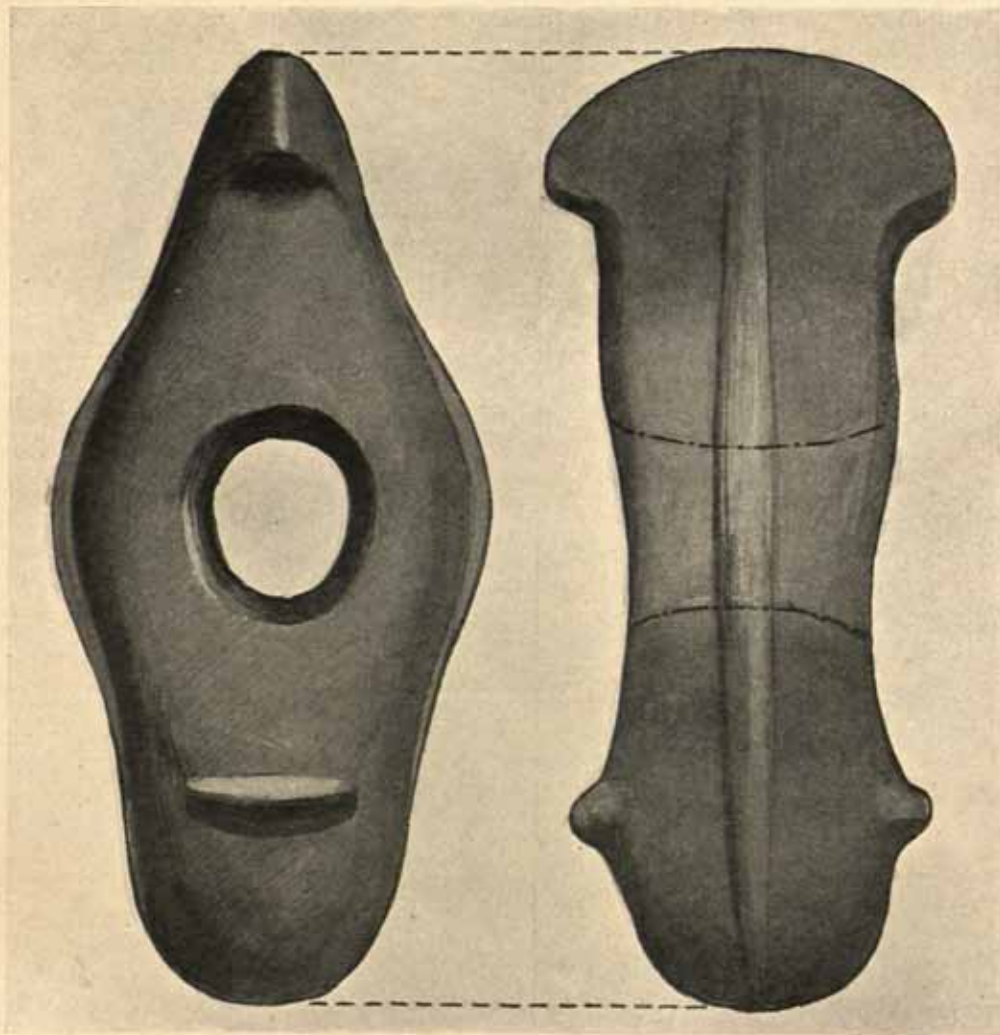


Fig. 3. Stone Axe-hammer from Lawfield, Renfrewshire. (1.)

ornate than utilitarian. But the same general remarks apply to other specimens found in Bronze Age and Neolithic graves.

The little imperforate axes of green stone found in Brittany's Neolithic tombs are too small to have been of everyday service.

About twenty years ago I discovered on the farm of Lawfield, near Kilmacolm, Renfrewshire, a small cavity, $1\frac{1}{2}$ foot in diameter, which had been cut down into the sub-soil about 18 inches, and contained an abundance of wood char and a small number of minute fragments

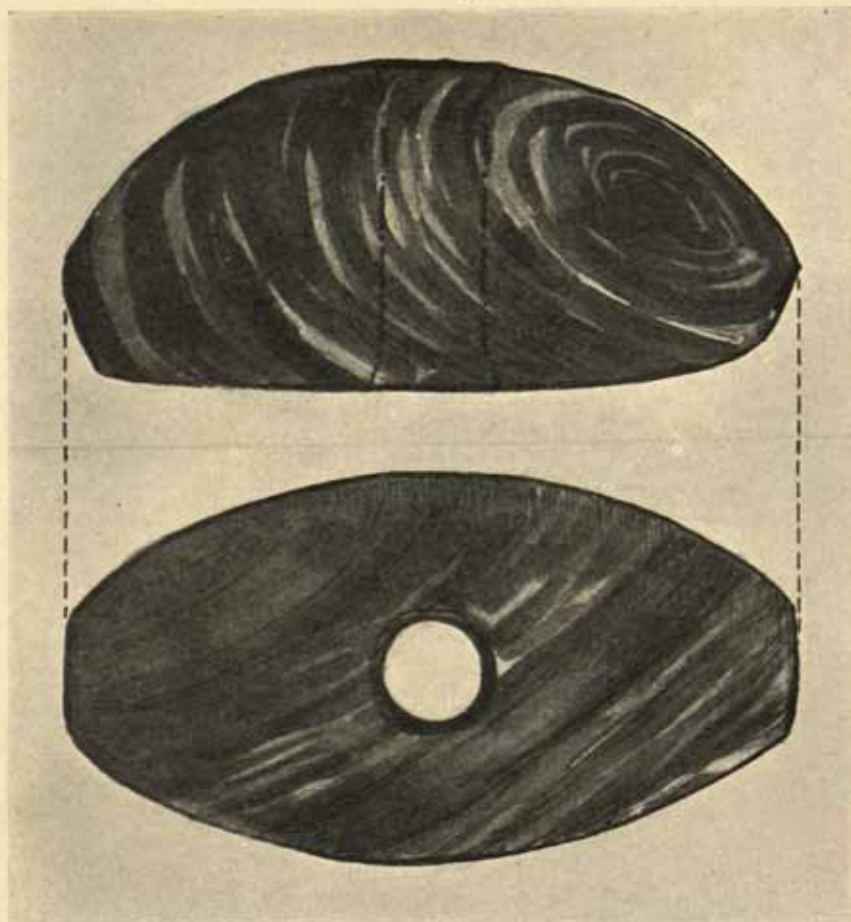


Fig. 4. Stone Axe-hammer found near Whithorn, Wigtownshire. (1.)

of cremated osseous remains (*Scottish Exh. Cat.* (1911), p. 828, item 12). At the base of the cavity I found the specially fine and curiously sculptured head of an axe-hammer, 4.95 inches long, which is shown in fig. 3.

Some feet from this place was found many years ago a cinerary vessel with overhanging upper part, which is now in the Kelvingrove Museum,

Glasgow. It is clear that on this site had been a cairn, as slight traces of it can still be detected.

There is also here illustrated a small perforated axe-hammer from Whithorn, Wigtownshire (fig. 4), and another found at the "Fossil

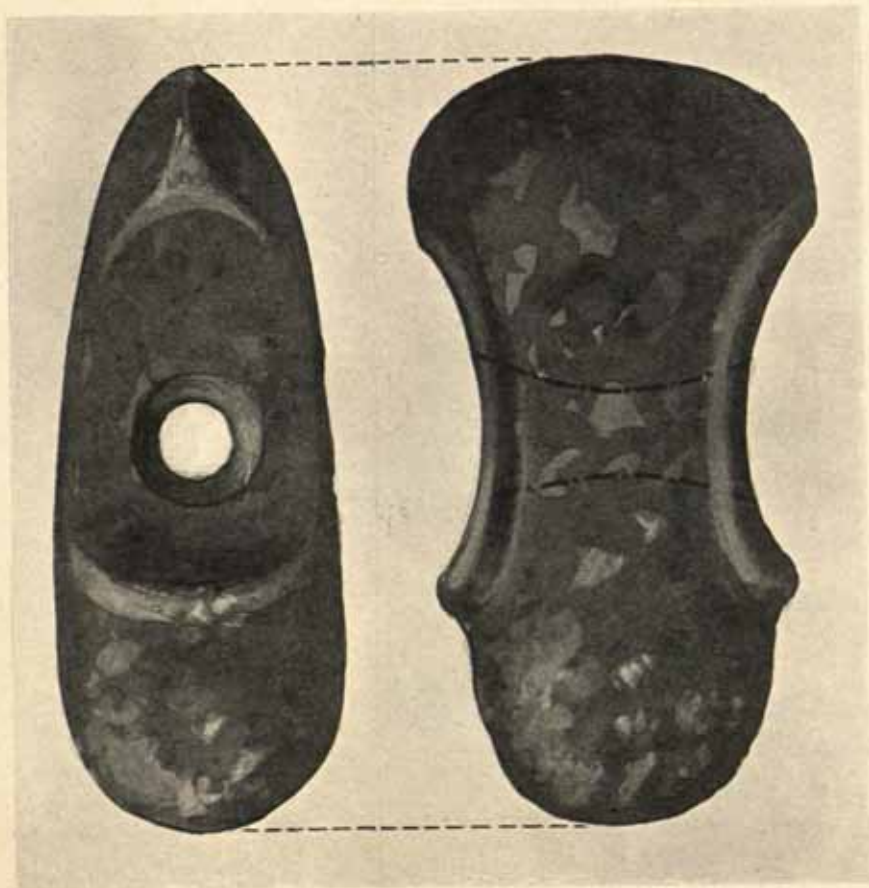


Fig. 5. Stone Axe-hammer found near the "Fossil Grove," Whiteinch, Glasgow. (1.)

Grove," Bronze Age Cemetery, Whiteinch, Glasgow, about November 1886 (fig. 5).

In the field adjoining that of Eldrig at Glengyre was found one-half of a mould for casting an implement somewhat like a bronze palstave (fig. 6). It measures $6\frac{5}{16}$ inches in length, $3\frac{3}{8}$ inches in greatest breadth, and $2\frac{5}{16}$ inches in thickness. The field in which it was got is called Fey-more; and it is interesting that the name for the field adjoining

is Smithy Hill, which may point to a tradition respecting metallurgical work having been carried on there. A careful scrutiny of the field, however, did not disclose, and Mr Kennedy has never at any time noticed there, any signs of a smithy or of such work having been carried on.

The nature of the object, evidently of bronze, which was cast in the matrix can be made out readily from a casting which has been prepared

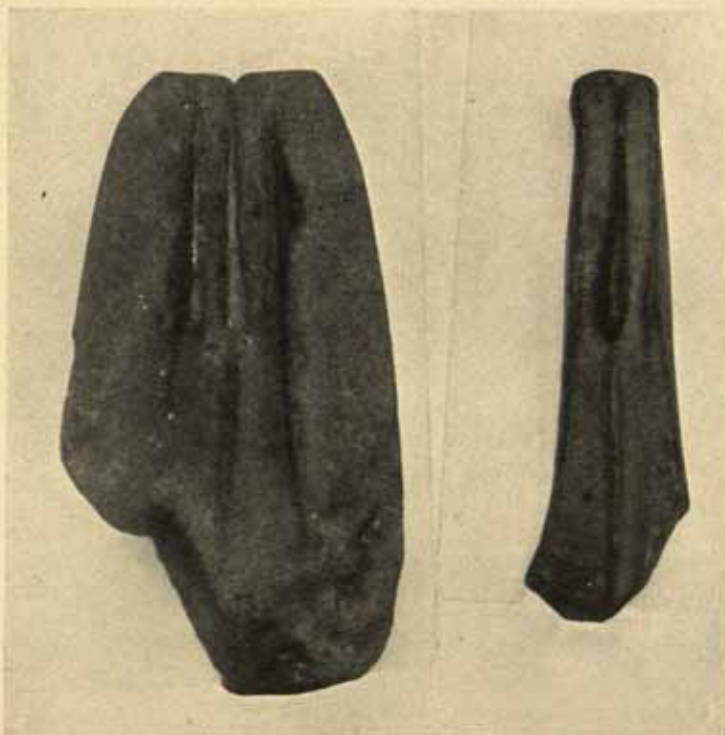


Fig. 6. Stone Mould from Glengyre, and Cast of Object made in it.

from the matrix (fig. 6). The object is unique in the annals of prehistoric archæology, whether in this country or abroad. It somewhat resembles the well-known bronze palstave of the Middle Bronze Age, but the direction of the "wings" is reversed and the butt is expanded. These are unique features, and indicate that the object has been a chisel, held like that of a modern stone-mason, by the thumb and first two fingers of the left hand, whether naked or wrapped in some cloth or skin, while the right hand plied a mallet, probably a wooden one of moderate size, against the butt.

Mr Kennedy has quite recently reported to me that about 138 feet to the north of where the small stone axe-hammer was found, he had come across a fragment of a stone, about 13 inches long by 6 inches broad and 5 inches thick, worn down at one side apparently by the whetting of stone axes. He also came across a worked stone 24 inches by 19 inches by 9½ inches thick, the purpose of which is not at all clear. It is a flat boulder of greywacke, and has neatly cut into it a slightly oval cavity measuring 3½ inches deep and 7¾ inches by 6¾ inches in length and breadth. There is evidence that the cavity has been heated, as the surface round it is reddened by fire.

During my visit Mr Kennedy took me round a large number of prehistoric sites, such as forts, large and small, hut sites, and earthen rings, in the neighbourhood. We were successful in discovering for the first time in the western part of Wigtownshire a large number of living rock-surfaces and one boulder, at Corsewall, sculptured with cups and analogous designs, and made rubbings of most of them.

On the rocks at the top of Torcraigag (where there is a fine fort) are two groups of large oval and circular cavities. Another group was noticed at Drumdow. Twelve groups comprising small and large cavities occur at Killiemacaddicam.

We visited and made a ground-plan of several interesting sites and of the twin or coalescing round cairns, 1060 feet south-west of North Cairn Farm, near Corsewall. Such double barrows of the Bronze Age are rare in Scotland, but several may be seen near Stonehenge.

Some years ago a man digging just within the edge of one of the cairns found preserved in the damp clay a curious fringe of moss fibres which he sent to me. It is very well preserved. It is made of the long, wiry, tough fibres of the moss *Polytrichum commune* (after they have been prepared by rubbing off the hairy excrescences, as I proved by actual experiment). The fibres were made into skeins or hanks. The hanks were doubled at the middle, where they were knitted together by the same fibres along a twig of pliable tough wood. From this the hanks were hung closely together, making an apron-like object.

In 1878-9, in Lochlee Crannog, Ayrshire, was found a similar object of the same kind of fibres; and another, but resembling a basket in process of manufacture, was found at the Roman Station, Newstead.

There seem to be only three recorded "finds" of this class of relic, so far as known peculiar to Scotland, which apparently ranges in time from the Bronze Age down to the beginning of this era.

MONDAY, 12th February 1923.

GEORGE MACDONALD, C.B., F.B.A., D.LITT., LL.D.,
in the Chair.

Before proceeding with the ordinary business of the Meeting, Dr Macdonald made the following reference to the recent death of Mr Robert Scott-Moncrieff:—

"The passing of a figure that has long been familiar at our gatherings is always a melancholy experience for those of us who remain. It is doubly melancholy when the figure is associated with a personality so eminently lovable as that of Robert Scott-Moncrieff. He was singularly unassuming; but, despite his modesty, he was known to a wide circle as a useful citizen, and within the narrower limits of his own profession he enjoyed a popularity that must have been almost unique. In everything he did for the Society—and he served it well and faithfully as Secretary for fourteen years—his diligence in business, his unruffled geniality, his ready helpfulness were conspicuous. Since he joined us in 1907 he has rarely been absent from a meeting. Unfortunately, the everyday demands upon his time made it impossible for him to contribute to the *Proceedings* as frequently as we could have wished. But such papers as he did publish had a value and a flavour of their own. Who else would have thought of writing upon the early use of Aqua Vitæ in Scotland? And who else could have done it with the same happy combination of the serious and the playful? That was characteristic. If the ages of stone and bronze found little favour in his eyes, he had a genuine love of all that related to the story of his country, and was exceptionally conversant with the lore and customs of bygone days. Witness the edition of the Household Book of Lady Grisell Baillie, which he prepared for the Scottish History Society. Socially he had many gifts. He could sing an old song with real feeling, and, when the mood was upon him, he could touch off the foibles of his antiquarian acquaintances in light verse with a deftness that few could equal. To those of us who were privileged to know him more intimately, his removal brings a keen sense of deprivation. It will be long before we forget the bright and cheery companion, whose conversation was coloured by a delightful sense of humour, and constantly lit up by flashes of a wit that was never other than good-natured; the loyal friend, whom sheer kindness of heart compelled to give ungrudgingly of his best whenever advice or assistance was asked."

Dr Macdonald moved, and it was agreed, that the Society record their great regret at the loss sustained through the death of Mr Scott-Moncrieff and express their deepest sympathy with his family, and that the Secretary be instructed to forward an excerpt of this minute to his daughter. The Meeting signified approval by standing up.

A Ballot having been taken, the following were elected Fellows:—

The Right Hon. LORD ELPHINSTONE, Carberry Tower, Musselburgh.

JOHN BEST, Warriston House, Edinburgh.

F. C. B. CADELL, 6 Ainslie Place.

JOHN CRAWFORD, M.A., 10 Corrennie Drive.

ARTHUR HOPE DRUMMOND DICKSON, 5 Lennox Street.

Miss DUNLOP of Shieldhill, Biggar.

CHARLES A. H. FRANKLIN, M.R.C.S. (Eng.), L.R.C.P. (Lon.), "Kwato,"
23 Liskeard Gardens, Blackheath, London, S.E. 3.

ROBERT LAMOND, M.A., LL.B., 8 Marchmont Terrace, Kelvinside,
Glasgow.

DUNCAN MACLEOD of Skeabost, by Portree, Skye.

CHARLES HAY MARSHALL, S.S.C., Dunholm, Dundee.

Mrs ANNIE ELIZABETH NELSON, Beechwood, Calderstones, Liverpool.

ALEXANDER MACLAREN ROBERTSON, Rosemount, Arbroath.

ARNOLD SUTTEL, M.R.S.I., Hillcroft, Harrogate.

HERBERT W. FORRESTER TEMPLE, Union Bank House, Tarland,
Aberdeen.

MALCOLM WARRACK, 7 Oxford Terrace.

WILLIAM J. C. WATT, M.B., Ch.B., 71 High Street, Paisley.

The following Donations to the Museum were intimated and thanks voted to the Donors:—

(1) By J. BOLAM JOHNSON, C.A., F.S.A.Scot.

Powderflask of copper, 5 inches long.

(2) By JOHN GARDNER, F.S.A.Scot.

Three Communion Tokens—Cumbernauld, 1774; Houston and Killallan; St Ninian's Relief Congregation.

(3) By JAMES L. ANDERSON, F.S.A.Scot.

Eleven Communion Tokens—Calder Clere, 1731; Chapel Renton, 1795; Closeburn, 1721; two of Clunie, Perthshire; two of Cockburnspath; Craigie, 1728; Creich, 1706; Crichton, 1763; and Cockpen, 1748.

(4) By Sir JAMES SCOTT, F.S.A.Scot.

Collection from Tentsmuir, St Andrews, Fife—Irregular block of Sandstone, measuring $8\frac{3}{4}$ inches by $1\frac{3}{8}$ inch by $6\frac{1}{2}$ inches, with a circular

cavity on top; Spear-head or large Arrow-head of dark grey flint, with stout tang, $1\frac{5}{16}$ inch in length; three barbed flint Arrow-heads, $\frac{1}{16}$ inch, $1\frac{3}{16}$ inch, and $1\frac{9}{16}$ inch in length; three Stone Whorls, of truncated



Fig. 1. Enamelled Ring from Tentsmuir. (1.)

biconical form, $\frac{5}{16}$ inch, $\frac{7}{8}$ inch, and 1 inch in diameter, decorated with vertical and horizontal incised lines; four Stone Whorls and half of another; a Whorl or Bead of shale, $1\frac{1}{2}$ inch diameter; Stone Button, $1\frac{1}{8}$ inch diameter, with two perforations, the outline being slightly irregular; Finger-ring of Bronze (fig. 1), the greater part of the hoop wanting, the bezel almost circular containing cloisons of yellow and green enamel; Bronze Buckle, $1\frac{9}{16}$ inch in length, showing tracings of gilding.

(5) By the NORTH BRITISH RAILWAY COMPANY.

Urn or Bowl, $4\frac{1}{16}$ inches in height, of hard ware with black bituminous coating; three circular Discs of Bronze with a raised boss in the centre, and three rivet holes round the margin, $2\frac{1}{2}$ inches diameter; remains of a similar Disc, much crushed; two fragments of thin Plates of Bronze of indeterminate use: all found together in a sand-pit near Camelon Railway Station, Stirlingshire. (See subsequent communication by Mungo Buchanan, Corresponding Member.)

(6) By Miss MARGARET MACKICHAN, 75 Spottiswoode Street.

Three Communion Tokens—Inveraray, Kilarrow (Bowmore), and Kilmartin, 1836.

(7) By Mrs ERSKINE BEVERIDGE, St Leonard's Hill, Dunfermline.

Clay Pot (fig. 2), 13 inches in height, $10\frac{1}{8}$ inches in diameter at the bulge, $3\frac{1}{4}$ inches diameter at base, the wall $\frac{1}{16}$ inch thick, found in the earth-house at Bac Mhic Connain, Vallay, North Uist.

(8) By Mrs WEBSTER, Dunearn, Burntisland.

Sword-stick, said to have belonged to Deacon Brodie, 3 feet $8\frac{1}{8}$ inches in length, of malacca cane, the blade of the sword 2 feet $5\frac{1}{8}$ inches long.

(9) By JAMES S. RICHARDSON, F.S.A.Scot.

Stone Mould for casting Pilgrims' Badges, $2\frac{1}{16}$ inches by $2\frac{1}{8}$ inches by $\frac{1}{16}$ inch, bearing on one face matrices for St Andrew on his cross, an equal-armed crucifix, and part of a smaller one, and on the other face matrices for two ring brooches of different sizes and two thistle-shaped pins: found in the old churchyard of St Andrew's Church, North Berwick. (See *Proceedings*, vol. xli. p. 431.)

(10) By LUDOVIC M'LELLAN MANN, F.S.A.Scot.

Plaster Cast of the half of a mould of reddish sandstone for casting objects resembling flanged bronze axes of uncommon form, $6\frac{5}{16}$ inches by



Fig. 2. Vessel of Pottery from Bac Mhic Connain, Vallay, North Uist.

$3\frac{3}{8}$ inches by $2\frac{5}{16}$ inches, which was found at Low Glengyre, Wigtownshire, and metal cast made in the mould. (See preceding communication by the Donor.)

The Donation of the following books for the Library was intimated:—

By Dr J. MAXWELL WOOD, F.S.A.Scot.

Robert Burns and the Riddell Family.

The Gallovidian Annual, 1920-1922.

The following Communications were read:—

I.

THE LEE PENNY. BY THOMAS REID, M.A., F.S.A.Scot.

The Lee Penny (fig. 1), the history of which forms the subject of the present communication, is the name of a charm, amulet, or talisman, preserved at Lee Castle, the seat of the ancient family of Lockhart. The Lee is an estate situated about two miles distant from the royal burgh of Lanark.

This talisman has had for a very long period the reputation of being endowed in some mysterious way with miraculous powers of healing, and many are the tales told of its curative effects in respect both of human maladies and cattle plagues.



Fig. 1. The Lee Penny. (1.)

Its history, to some extent legendary, extends over nearly six centuries, dating from the time of the expedition of the Good Lord James of Douglas, when he carried furth of Scotland the heart of Bruce to make war against the Infidel—an enterprise undertaken in accordance with King Robert's dying request in 1329.

And what is the outward appearance of the Lee Penny? It simply consists of a small stone set in the centre of a silver coin—a setting which it has retained since its first arrival at its Lanarkshire home—for it is not a stone native to Scotland, it came from the sunny fields of Southern Spain. There is nothing in its appearance to recommend it to the eye of the connoisseur in precious stones. It possesses none of the glitter of a cairngorm to dazzle the sight of the spectator. It presents a dull, unattractive look, and has acquired widespread notice solely from its alleged virtues as a powerful talisman for curing disease in man and beast.

A careful examination of the stone reveals the following particulars:—it is of a dark red colour, semi-transparent, triangular in shape, somewhat resembling a human heart, slightly fractured on one side, and measuring $\frac{1}{8}$ of an inch each way. It is said that lapidaries to whose expert examination it has been submitted have been unable to assign its composition to any recognised classification of precious stones.

The silver coin in which the stone is set is now after the lapse of centuries considerably defaced. From a few letters still remaining, and

the cross which was at one time plainly discernible on it, the coin, which seems to have been a groat, has been assigned to the reign of Edward I. of England. Hence from its local habitation and its having been mistaken for a silver penny, this charm has become widely known in Scotland as the Lee Penny, and in the popular speech of Northumberland and Yorkshire as the Lockerlee Penny.

The traditional story of its discovery and the revelation of the healing virtues ascribed to it is as follows. Among those who took part in the Douglas expedition, mentioned above, was Sir Symon Loccard of The Lee. He had already distinguished himself on the patriotic side of the War of Independence and had been knighted by the hand of The Bruce. The expedition in the course of its outward journey reached the coast of Spain. There the little band of Scottish warriors became aware that Alphonso, King of Castile and Leon, was waging war with the Saracens of Granada, led by Osmyn, the Moorish Governor. In the opinion of the Scottish leader, the occasion was one which called for his active participation on the side of Alphonso, since the conflict was with the forces of the Unbeliever, and so was in accordance with the express object of the expedition.

In one of the skirmishes with the foe Sir Symon Loccard chanced to capture an Arab prince, for whose ransom his wife, coming to the Christian camp, offered a large sum of money. In counting out the stipulated price she happened to let drop from her purse a small pebble, and showed such intense eagerness in the attempt to recover it that Sir Symon's attention was attracted by the Moorish dame's haste in snatching it. He naturally deemed the stone to be a gem of rare value and demanded it as part of the redemption price; otherwise, he declared, the captive would not be set free. Thereupon the lady reluctantly complied. At the same time she informed the Scottish knight of the mysterious virtues of the stone in curing all manner of disease in man and beast.

Such is the story of the acquisition of the amulet as preserved in the Lee family. A perusal of this narrative prompted Sir Walter Scott to write his Eastern romance entitled *The Talisman*, and suggested the scene in which El Hakim performs an important part. It will be seen from a reference to the Introduction of *The Talisman* that the novelist, in giving his version of the story, differs slightly from the family traditional narrative. Beyond the name "Talisman" and the scene with El Hakim the novel has no further connection with the amulet of Lee.

The interview with the Moorish lady must have taken place somewhere on the borders of Andalusia and Granada, where the opposing

forces had so many encounters. It was in one of these that the Douglas fell, near the town of Theba, just over the Andalusian border, and within the territory of Granada. His death induced the expedition to return to Scotland. In this return Sir Symon Loccard must have taken a conspicuous part under Earl Keith. In remembrance of his services in bringing back to Scotland the "Heart of Bruce," Sir Symon Loccard, according to the Lee family tradition, had his name changed to Lockheart or Lockhart, and was permitted to add to the family coat of arms a heart within a fetterlock. The heart of Bruce was, as is well known, deposited at Melrose, and the Moorish lady's charm found henceforth a domicile and a renewed reputation for healing virtues at Sir Symon's Lanarkshire home of The Lee.

After arriving in Scotland the Lee Penny entered on a long course of remedial usage, extending over both Catholic and Protestant times. The method of employing the talisman for curative purposes was this. No form of words of incantation was spoken, such as sorcerers, witches, and charmers were wont to mutter in practising their magical spells. The charming, if it may be so called, lay in the strict adherence to the mode of procedure in preparing the medicated medium through which the cure was to be administered. No deviation therefrom was permissible, otherwise the remedial effect was destroyed. The method employed was one of extreme simplicity. The celebrant, holding the "Penny" with its magic gem by the chain attached to it, proceeds to plunge the amulet three times into pure spring water and then gives it a swirl round once, but no more, a procedure popularly known as "three dips and a sweep." This process formed an essential and indispensable part of the administration. In the course of years some other ceremonies were in the popular imagination deemed highly desirable and added to the primitive practice. The following, composed by a Lanark bard about the beginning of last century, will explain these additional rites:—

" See, see the dame with port divine,
Approach before the holy shrine;
And see her soon the stairs descend,
And soon the precious Gem suspend;
A laver next from crystal spring
Her fair officious maidens bring;
Beside the vase the Priestess stands,
The sacred symbol in her hands;
Which thrice she plunges in the tide,
And twirls it once from side to side.—
Now all is done—the feat is o'er,
And you've the panacean cure!
Then fill your bottles, haste away,
Unless decline the beams of day;

But first it is her high behest,
You must partake the genial feast ;
Or, if grim night her curtains spread,
With sleep enjoy the silken bed,
Until the morning's russet gray
Unbars the golden gates of day ;
Then by the dawn you may depart
With the best blessings of her heart :—
And other caution gives she none
But, 'See it touch not earth or stone.'
The hallowed water will afford
Health to the peasant and the lord ;
But chiefly to the beastial kind
A sure protection you will find."

Instances will be mentioned later on in which some of these additional rites were faithfully observed.

The present writer several years ago had an opportunity of testing the potency of the Lee Penny in communicating a peculiar flavour to water into which it had been dipped. One day I happened to be making a call at the Commercial Bank in Lanark. The banker informed me that at the time he had the custody of the Lee talisman; for in the absence of the Lockhart family from their Castle their prized heirloom was entrusted to his bank for safe keeping. The banker kindly offered to submit the following test experiment. Filling two tumblers with pure water, he invited me to taste both in order that I might be satisfied that their contents were from the same source and be able to distinguish any subsequent difference. Then withdrawing to his private room, he gave, as he explained, the orthodox "three dips and a sweel" to the water in one of the tumblers. He then returned with the same two glasses for further testing. With the taste of the pure water on my palate, I experienced no difficulty in singling out the one into which the Penny had been dipped; it had a perceptibly peculiar flavour. I can give no opinion upon the healing virtues of the water so treated. I had no ailment at the time to cure. The draught certainly did me no harm.

There exists no extant record of the employment of the Lee Penny as a talisman for healing purposes during those years that elapsed from its arrival in this country in 1330 down to early Protestant times. That it was so used in Catholic Scotland may be safely inferred not only from the attitude of the Mediæval Church towards occult and mysterious powers of remedy believed to be by divine express purpose inherent in many natural phenomena, but also from the hostile attitude evinced by the Reformed Church of Scotland against every practice that savoured of charming. The older ecclesiastical authorities would doubtless view with favour the healing virtues imputed to the Lee charm, and would

regard the popular faith reposed in its curative powers as it viewed the universal trust placed in the medicinal effects of water drawn from a holy well, and an unqualified blessing would be pronounced on its usage by the Catholic priesthood.

The prevalence of its employment in pre-Reformation times receives confirmation from consideration of an attempt made some years after 1560, on the part of a few strict Presbyterian partisans to prevent through the Church courts the use of the Lee Penny as a talisman. Their action presupposes a well-known and long-continued practice in Catholic times.

It was at an Assembly "holden at Glasgow" in 1638 that an attempt was made to pronounce ecclesiastical censure on the Lee amulet, at the instance of one Gavin Hamilton, supported by the ministers of Lanark. The minute of Assembly embodying the charge against the Lee Penny and the decision of the Church court thereanent is as follows. "Quhilk Dye amongst the Referies of the Brethern of the Ministrie of Lanark it was proponit, to the Synode, that Gawen Hamilton of Raploche had preferit ane complaint before them against Sir James Lockhart of Lee anent the Superstitious using of ane Stone, set in silver, for the curing of diseased Cattel, qlk the said Gawen affirmed could not be Lawfullie Used, and that they had defferit to give ony decisionne therein till the advise of the Assemblie might be had concerning the same, the Assemblie having inquired of the manner of Using thereof and particularlie onderstood be examinationne of the Laird of Lee, and otherwise that the custome is only to cast the stone in sume water and give the diseasit cattell thereof to drink and yt the same is done without using onie wordes such as charmers and sorcerers use in their Unlawful Practicess and considering that in nature they are many thinges sain to work strange effect qr of no humane wit can give a reason, it having pleased God to give unto stones & herbes a special Vertue for the healings of mony Infirmities in man and beast, advises the Brethern to surcease thair process as qrin they perceive no ground of offence and admonishes the Laird of Lee in the Using the said stone to tak heed that it be Ust heir after wt the least scandall that possiblie may be. Extract out of the Bookes of Assemblie Holden at Glasgow and subscribed by thair Clerk by their Command. M: Robert Young Clerk to the Assemblie at Glasgow."

Whether in consequence of the Assembly's favourable decision, harmonising, as it did, with the popular belief in this amulet's efficacy, or not, the instances of which record has been kept of its use in post-Reformation times testify to an increased popularity in its reputed remedial virtues, and are fairly illustrative of the manner

of using it and the ailments for which it was supposed to be an infallible cure.

The earliest recorded instance of its actual use belongs to the first half of the seventeenth century. When the plague visited Newcastle-upon-Tyne in the reign of Charles I., the Corporation of that town borrowed the Lee Penny and deposited the sum of £6000 as a security for its safe return. So convinced were the borrowers of its beneficial effects that they expressed their willingness to forfeit their pledge, large as it was, in order to retain possession of so powerful a charm. Sir James Lockhart, at that time Laird of Lee, had no hesitation in declining the proposal. This is the same Sir James as noticed above. He was a stout cavalier, and the charge of necromancy urged against him in granting the use of his "Penny" would be grounded as much on political as on religious considerations.

It was in cases of hydrophobia in man and beast that the "dipt" water of the Lee Penny was considered a sure remedy. The most remarkable instance of its use as a cure for this distemper occurred about the beginning of the eighteenth century. Lady Baird of Saughton-hall, near Edinburgh, had been bitten by a mad dog and had begun to exhibit all the symptoms of that terrible disease. Her husband procured the loan of the Lee talisman, and the lady was made to drink copiously of the medicated water and to bathe repeatedly in water similarly treated. After several weeks of the application of this method of cure Lady Baird is said to have recovered her wonted health. An old servant of the Lockhart family of that period was in the habit of relating, years afterwards, that when she had regained her strength, Lady Baird and her husband entertained the Laird of Lee and his lady for many days, in the most sumptuous manner, on account of her miraculous recovery and in gratitude for the generous loan of the Lee Penny.

About the year 1817 a farmer and his son came all the way on horseback to Lee from Northumberland, each carrying two small kegs attached to the saddle to hold the water into which the Penny had been immersed. It appears in this case that, as a condition on which the efficacy of the water depended, the casks containing the charmed fluid should not be permitted to touch the ground until home was reached. In consequence every care was taken to prop up the saddles with tressels when the barrels were removed from the horses for the purpose of resting or baiting.

In 1824 a gentleman arrived at Lee from Yorkshire and carried off a quantity of the "dipt" water as a cure for his cattle which had been bitten by a mad dog.

It is to be noted that during the closing years of the eighteenth

century and the first half of the nineteenth, the popular belief in the sanative virtues of the Lee Penny seems to have been at the strongest. Writing in 1828, William Davidson, author of a *History of Lanark*, records:—"Indeed not a summer passes without pilgrims visiting the Lee Penny from all quarters to prove its healing powers; and so convinced are many people of its potent virtues that a failure is attributed to come from improper observance of the ceremonies of the 'three dips and a sweet.'"

In 1847, as recorded by William Cowan, who also writes a *History of Lanark*, a gentleman from Yorkshire got a tin vessel made in Lanark for the purpose of taking away to his home a quantity of the charmed element. The same writer, whose book was published in 1857, adds, "The Penny is carefully kept at Lee Castle, and large numbers hearing of its remarkable history visit it every year. An album is kept beside it for inserting the names of the visitors."

Writing in 1853, Mr Hector Maclean, factor on the estate of Lee and Carnwath, says, "It will be thought, doubtless, by some that now it can only be looked upon as a mere subject of curiosity; such, however, is not the case. The water is still frequently applied for by the inhabitants of the different villages at a considerable distance from Lee. But the most recent case of which we have heard happened a few months ago, and fully exemplified the great faith placed on it by our southern neighbours and their recollection of its talismanic influence upon the sick and afflicted. The neighbourhood of Kirkwhelpington and Birtley, Northumberland, had been subjected to much alarm by the visits of dogs in a rabid state; no fewer than seven of these animals had been killed. The dread of the inhabitants was naturally great, and the injury done excessive, principally among the farm stock: the number of sheep and cattle bitten and which died of hydrophobia was incredible. A horse having bitten a man's hand severely at Gunnerton, the dreadful nature of the complaint and the hitherto impossibility of its cure excited great alarm in the minds of the people and a desire to resort to any means whereby to avert its fatal effects. In this state of doubt and anxiety they bethought themselves of the Lee Penny, in which they still had a belief, and hoped that the waters would effect what no mortal means could do. They accordingly sent express to Lee for a large quantity of the water. The person sent, having arrived on Sunday morning, procured a "barrel full," and started back immediately with that which was looked upon as the only hope of the man labouring under the complaint; and, strange as it may seem, no bad effects resulted from the wound.' Mr Maclean adds:—"The sceptic may doubt; but we merely state a fact, and for the accuracy of which we can vouch."

One of the English newspapers at the time taking notice of the circumstance adds:—"The spirit of the age has not yet banished the popular belief in the 'Lockerlee Water,' a large supply having been procured by voluntary subscription."

Since the middle of last century no instance has been recorded of the Lee Penny being employed as a talisman. Its last public appearance was made not with a view to testing its curative virtues, but as a spell to procure financial aid for a highly deserving object. The occasion was a garden fête and sale of work held on Saturday, 3rd August 1918, at Lee, when as yet the issues of the Great War were still trembling in the balance; the object was to raise funds in behoof of the Red Cross Society. During the course of the afternoon it was announced that the Lee Penny would be exhibited to visitors. The then Laird of Lee, Sir Simon MacDonald Lockhart, himself held the amulet in his hand when exhibiting it to a large crowd of interested and generous spectators. The ancestral name of the exhibitor and the reputed character of the Spanish stone elicited a twofold reflection. It was fitting that this ancient charm to which healing powers had during so many long by-past years been implicitly attributed should lend its historical influence for the beneficent object of a Red Cross appeal for aid. And further, there were those who called to recollection the coincidence that a Symon Loccard was the first to bring this talisman to Lee, and that another Simon Lockhart was after well-nigh six hundred years on the present occasion displaying his ancestor's trophy of war—a relic so interesting by reason of its reputed curative virtues and so amply endowed with legendary lore.

II.

NOTE ON A HOARD OF COINS FOUND AT AUCHENBART, IN THE PARISH OF GALSTON, AYRSHIRE. BY GEORGE MACDONALD, C.B., F.B.A., D.LITT., LL.D., F.S.A.Scot.

As a rule, all Scottish coin-finds dating from the troublous days of the Wars of Independence contain an appreciable admixture of sterlings from the Low Countries. The proportion varies, but rarely rises as high as 10 per cent. More than seventy years ago, however, Edward Hawkins described to the Numismatic Society of London a hoard which had come to light near Kirkcudbright and which was almost entirely composed of "counterfeit sterlings." There were 92 of these, as against 1 penny of Alexander III. and 5 of Edward I., the last including a barbarous imitation of the Edwardian pennies minted in Ireland.¹ This curious hoard has hitherto stood alone. I am now able to record another of precisely similar character and of more than double the size.



Fig. 1. Earthenware Jug from Auchenbart, Ayrshire.

On 6th September last, John Cochrane, son of Matthew Cochrane, farmer at Auchenbart, in the parish of Galston, was engaged repairing drains in a field on the farm. While digging in a mossy part of the ground, he noticed what

looked like silver coins in the soil which he was turning over. A closer examination of some of the objects that had attracted his attention confirmed his opinion, and on clearing a little more of the earth away he discovered a small jug of ordinary ware (fig. 1). Lifting it out, he found that it was broken, but that it still contained about 170 coins. A further search enabled him to pick up 70 or 80 more which were lying loose. These round figures are taken from the Procurator Fiscal's report, but they may be too large. While they indicate a total of 240 or 250, the number which the King's and Lord Treasurer's Remembrancer forwarded to the National Museum for examination and selection was 216, and I previously had an opportunity of seeing 12 others which had passed into private hands before the Crown authorities had

¹ *Numismatic Chronicle*, xlii. (1851) pp. 86-94.

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time to lodge their claim. The jug and 45 sterlings were retained for the Society's collection. The remainder were, as usual, returned to the finder along with suitable compensation.

Not a single one of the 228 specimens which I saw was Scottish; 7 were pennies of Edward I. of England; the balance of 221 consisted of foreign sterlings. The following is a summary:—

PENNIES OF EDWARD I.

Class III. (c. 1280-1).

Mint of London	2
Mint of Canterbury	2
Mint of Durham	1

Class IV. (c. 1282-90).

Mint of Canterbury	1
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<i>Contemporary Forgery.</i>	1
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—
7
—

FOREIGN STERLINGS.

Gui de Dampierre, Count of Flanders (1280-1305).

Mint of Namur	33
Mint of Douai	1
Mint of Alost	3
Uncertain Mint	14
	—
	51
	—

Jean d'Avesnes, Count of Hainaut (1280-1304).

Mint of Valenciennes	22
Mint of Mons	24
Mint of Maubeuge	15
	—
	61
	—

Gui de Dampierre, Count of Namur (1263-97).

Mint of Namur	5
	—

Hainaut and Namur.

'Enigmatic' Sterlings	4
	—

Jean I., Duke of Brabant (1261-94).

Uncertain Mint	40
Mint of Maestricht	1
Mint of Brussels	1
	<hr/>
	42
	<hr/>

Hugues de Châlon, Bishop of Liège (1296-1301).

Mint of Statte	1
Mint of Fosses	1
	<hr/>
	2
	<hr/>

Jean I. of Louvain, Signor of Herstal (1285-1309).

Mint of Herstal	10
	<hr/>

Arnould VIII., Count of Loos (1280-1328).

Mint of Loos	24
	<hr/>

Henry IV., Count of Luxemburg (1288-1309).

As Marquis d'Arlon	1
	<hr/>

Bishopric of Cambrai.

Guillaume de Hainaut (1292-96)	11
Gui de Collemède (1296-1306)	9
Capitular Issues	2
	<hr/>
	22
	<hr/>

A brief survey of the foregoing list enables the date of burial of the hoard to be fixed within comparatively narrow limits. The *terminus post quem* is obviously 1296. On the other hand, the absence of sterlings of Gaucher de Châtillon (1303-29) and of Robert de Béthune (1305-22) is significant, just as is the fact that the latest of the Edward pennies was minted before 1291. We cannot go far wrong if we conclude that the jug was originally concealed in or about 1300. Some of the sterlings were of great rarity, and that of Henry IV., Count of Luxemburg—afterwards better known as the Emperor Henry VII.—was unique.

III.

SCOTTISH BRONZE AGE HOARDS. BY J. GRAHAM CALLANDER,
F.S.A.Scot., DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES.

During the last few years the Society has been fortunate in securing for the National Museum a number of Bronze Age hoards from different parts of Scotland, some of these groups containing varieties of implements, weapons, and ornaments not hitherto found in association in the country. As the number of Scottish hoards now recorded is reasonably large, it is evident that a classification, analysis, and comparison of their component parts may yield a considerable amount of information about the chronology of their period.

In the following notes the discovery of two associated objects will be treated as a hoard, even though they may be examples of the same type of relic, and an attempt will be made to correlate, as far as possible, the weapons and implements with the pottery of the period. Owing to the absence of the larger objects of bronze from the sepulchral deposits, from which practically all the pottery has come, this is not easy. But though it may be possible to arrive at fairly definite conclusions with regard to the earlier ceramic types—the beaker and food-vessel—more evidence must be forthcoming before it can be stated with any degree of confidence what types of weapons and tools were in use when cinerary urns were first introduced into the country or when these vessels went out of use, or if any class of weapon can be associated with any particular variety of this kind of pottery.

Although there is a very good selection of bronze implements in our National Collection, the number of these objects found in Scotland cannot be considered very large when compared with the number found in England and Ireland. The number of Irish bronze axes, in their various forms, preserved in the Irish National Museum and in six other important collections, amounts to about two thousand four hundred, about fifteen hundred being in Dublin alone,¹ while there are nearly three hundred more in our own National Museum, making a total of two thousand seven hundred specimens; the number of Scottish examples in our Museum is only two hundred and ninety-eight, eighty-one being flat axes, ninety-four flanged axes or palstaves, including two with the flanges in planes parallel to the cutting edge, and one hundred and twenty-three socketed axes, including five fragments of sockets and edges. Many other kinds of Bronze Age weapons and

¹ *Proc. Royal Irish Academy*, vol. xxxiii. p. 525.

implements preponderate in Ireland, though not to the same extent as the axe. In spite of this, the actual number of hoards of bronze objects of the period recorded from Scotland is considerably larger than that from Ireland—seventy¹ against thirty or thereby;² and the types of relics of which they are composed are generally more varied. This is difficult to explain, but the same thing applies to the stone moulds for casting flat bronze axes, eight having been found in the north-east of Scotland, and, so far as I can ascertain, only five in Ireland. Time, however, may reverse the positions. In England hoards are much more numerous, Sir John Evans having compiled a list of one hundred and three more than forty years ago,³ and many new discoveries have been reported since then.

Montelius in his "Chronology of the British Bronze Age"⁴ has divided the Bronze Age into five periods, which system has been adopted by Professor Macalister in his *Ireland in Pre-Celtic Times*; but, as certain types of objects are absent from, or very scarce in, the Scottish hoards and the general collections from the country, this system is not quite suitable for our purpose at present. In the following lists I have tabulated all the Scottish hoards which have come under my notice, arranging them in four chronological horizons according to the occurrence in them of flat copper axes, flat bronze axes, flanged axes and palstaves, and socketed axes, or of known contemporary types of objects. This may be considered rather an arbitrary system when we consider that during times of transition earlier types of weapons and implements would survive long after improved varieties had been evolved or introduced, but an examination of the list of Scottish hoards will show that the relics can be grouped into well-defined compartments containing very few cases of overlapping.

In considering the varieties of objects which should be assigned to the different periods, doubtless some of them, such as small tanged chisels without a shoulder or stop, flint arrow-heads, and stone axe-hammers, were in use during more than one, but only when such things have been found in association with objects belonging to different times have they been listed in more than one period.

Seventy hoards have been noted, of which one has been assigned to Period I.—the time of the flat copper axe; thirteen have been assigned

¹ Objects of bronze and ornaments found with pottery are not included in the lists of hoards; neither are hoards of gold objects, but they are included in the list of finds of Scottish Bronze Age gold ornaments at the end of this paper.

² *Proc. R.I.A.*, vol. xxxiii. p. 511; *Journal Royal Anthropol. Inst.*, vol. xxxi. p. 276; Coffey, *Bronze Age in Ireland*, p. 81.

³ *Ancient Bronze Implements*, p. 460.

⁴ *Archaeologia*, vol. lxi. p. 97.

to Period II.—the time of the flat bronze axe; seven to Period III.—the time of the flanged axe and palstave; and forty-nine to Period IV.—the time of the socketed axe. The small number of hoards belonging to the first three periods is very marked, the same peculiarity being noticeable both in English and Irish hoards. In all likelihood this may be explained by the scarcity of metal in the earlier periods, by the practice of melting down weapons and implements which had become worn, broken, or obsolete, for the purpose of recasting them into more up-to-date and improved types, and by the increase in the stock of metal as time went on.

PERIOD I.—FLAT COPPER AXES.

There is only one hoard which can be assigned to this period, which Montelius calls the Copper Age.¹ This hoard was discovered at Tonderghie, Wigtownshire, in the extreme south of Scotland, and it consisted of six axes found in a clay vessel. Although it is more than one hundred and twenty years since these relics were discovered, and they have disappeared, the description of them in the old *Statistical Account of Scotland*, published in 1795, is so unusually explicit, that though the objects were not recognised as axes by the writer of the article, their true character is quite apparent. They are stated to have been made of *copper* and to have been found in an earthen vessel, and they are described as having been flat on one side and "a little rounded on the other." Further, the outline of one appears as an illustration, from which it is seen that it is a flat axe of an early type, measuring $4\frac{1}{2}$ inches long and $2\frac{1}{4}$ inches broad. It bears a close resemblance to an axe of copper found near Perth (fig. 1)² and preserved in the Museum, which is almost similar in outline, and also flat on one side and rounded on the other. This axe is evidently unfinished, simply a rough casting fresh from the mould, and everything points to the Tonderghie examples having been the same. Even if the metal of which these axes were made had not been mentioned, the shape of the one illustrated and the few details regarding their form would justify our placing them at the very beginning of the flat axe period of Scotland. There are a few more Scottish flat copper axes in the National Museum, but the exact number cannot be stated as so few Scottish axes have been submitted to analysis, and perhaps some of the halbert blades may be of this metal.

¹ It is doubtful whether we are quite justified in speaking of a Copper Period in Scotland, as so few copper weapons have been recorded.

² *Museum Catalogue*, DA, 64.

PERIOD II.—FLAT BRONZE AXES.

Thirteen hoards fall into the flat bronze axe period; four of these consist solely of flat axes, four of flat axes and other relics, one of two axes with slight flanges and a dagger, three entirely of halberts and

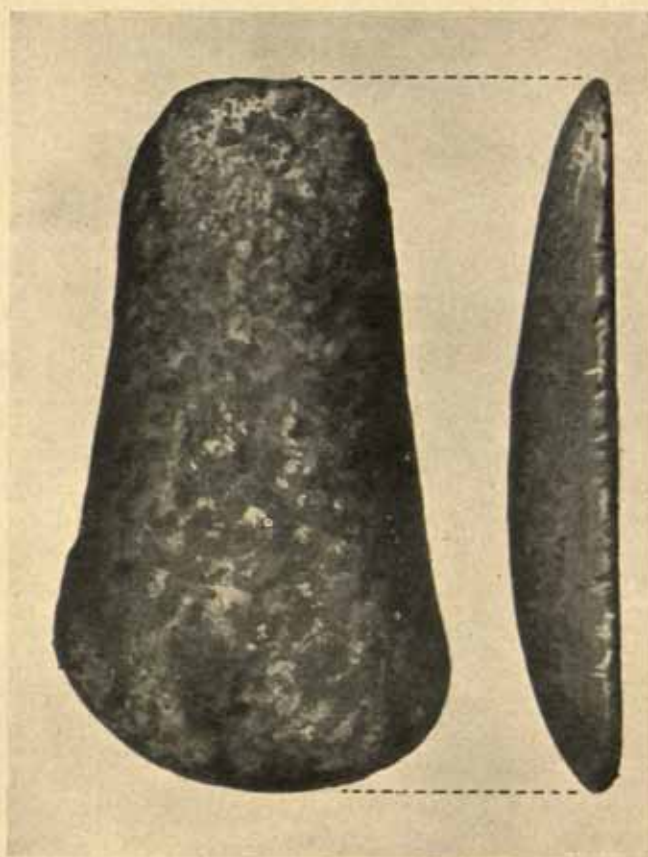


Fig. 1. Copper Axe from Perth (Period I.). (.)

one of plain armlets. All the axes which have survived have broad, well-developed cutting edges. Of the first four hoards only those from Nairnshire and Colleopard, Banff, call for special mention. One of the Nairn axes has two broad shallow hollows or flutings on each face running parallel to the sides, which, instead of being flat, are angular with a series of impinging lenticular facets hammered in the apex, and there are a number of small cuts on the angle at the junction of the faces and sides. One of the Colleopard axes shows the faces decorated similarly

Number.	Where Found.	Flat Axes.	Flanged Axes.	Halberts.	Plain Armlets.	Miscellaneous Relics.	References.
PERIOD I.—FLAT COPPER AXES.							
1	Tonderghie, Whithorn, Wig- townshire.	6	..	..	..	clay vessel	<i>Statistical Account</i> , vol. xvi. p. 285, fig. on p. 286.
PERIOD II.—FLAT BRONZE AXES.							
1	Ladyhill, Avoch, Ross-shire	5	..	..	..	..	<i>Proceedings</i> , vol. xix. p. 404.
2	Hill of Fortrie of Balnoon, Inverkeithney, Banffshire.	7	..	..	..	..	<i>Ibid.</i> , vol. i. p. 138.
3	Nairnshire	2	..	..	..	..	<i>Ibid.</i> , vol. lvi. p. 358.
4	Colleonard, Banff	7	..	..	..	..	<i>Ibid.</i> , vol. iii. p. 245.
5	Sluie, Edinkillie, Morayshire	2	..	1	..	..	<i>Ibid.</i> , vol. iv. p. 187, and vol. ix. p. 432.
6	The Maidens, Culzean, Ayr- shire.	5	..	..	1	..	<i>Ibid.</i> , vol. xvii. p. 433; <i>Arch. Coll. of Ayr and Wigton</i> , vol. iv. p. 1.
7	Auchnacree, Fern, Forfar- shire.	3	..	..	1	2 knives	<i>Proceedings</i> , vol. lvi. p. 351.
8	Migdale, Skibo, Sutherland	2	..	..	6	2 or 3 ornamented armlets, 2 ear-rings, necklace of tubular bronze beads, 4 or 5 conical hollow bronze bosses, 6 jet buttons.	<i>Ibid.</i> , vol. xxxv. p. 266.
9	Gavel Möss, Lochwinnoch, Renfrewshire.	..	2	..	..	1 dagger.	
10	Baile-nan-Coille, Strath Brora, Sutherland.	..	..	3	..	..	<i>Ibid.</i> , vol. xvi. p. 240.
11	New Park, New Machar, Aber- deenshire.	..	..	3	..	..	<i>Proc. Anat. and An- throp. Soc. of Uni- versity of Aberdeen</i> , 1906-8, p. 115.
12	Kingarth, Bute	..	..	3 or 5	..	..	<i>Proceedings</i> , vol. iv. p. 396.
13	Uppat, Sutherland	..	..	..	2	..	Dunrobin Castle Museum.

to the Nairn example though the sides are flat, two of them—one of which is incomplete—have only one broad flat hollow running parallel to each side, three have the faces ornamented with rows of longitudinal incisions formed by a chisel with curved edge or perhaps by blows of an axe, and one, incomplete, is plain. The axes in the next four hoards are of normal form, but one, if not both, of the examples from Sluie, Morayshire, has a film of lightish colour on the surface as if it had been tinned; it is understood that these axes were found in association with a halbert, though the record is not quite clear on this point. Three of the hoards, from The Maidens, Ayrshire, Auchnacree, Forfarshire, and Migdale, Sutherland, which contained five, three, and two flat bronze axes respectively of the usual type, also included one or more examples of a plain armlet which, when perfect, was of regular thickness all round with a break in the ring, the ends being pressed closely together, and the inner curve of the ring slightly flattened so that it was of double convex section. In addition to an armlet the Auchnacree hoard contained two thin flat knives: the first, $6\frac{1}{2}$ inches in length, had straight sides tapering slightly towards a broad rounded point, and a semi-lunar butt which had had nine rivet holes (fig. 2, No. 5); and the second, $2\frac{5}{8}$ inches in length, had the sides worn slightly concave by sharpening and the point made narrow though not sharp, the base being triangular with five rivet holes (fig. 2, No. 4). The Migdale hoard, one of the most important found in Scotland, contained two flat axes, six plain armlets of the type just described, two cordoned armlets (fig. 2, No. 10), two ear-rings (fig. 2, No. 11), a necklace of tubular bronze beads, four or five conical hollow bronze bosses (fig. 2, No. 12), and six jet buttons with V-shaped perforations. These three hoards, with their special types of armlets, knives, and jet buttons, are invaluable, as they supply us with a set of links connecting chronologically the flat bronze axe with the beakers and food-vessels of the country.

For the information regarding the hoard from Gavel Moss, Renfrewshire, I am indebted to Mr Ludovic M'L. Mann. This hoard consists of two flat axes with slight flanges and curved, expanded cutting edges, and a dagger. The objects have been burnished by the person into whose hands they fell till they shine like gold, and have been partly mutilated by having been mounted on handles and nails driven through them to keep them in position. One axe measures 6 inches in length and $3\frac{1}{2}$ inches across the horns of the cutting edge, and the sides are decorated by oblique flutings so as to form the well-known cable design. The other axe, which measures $3\frac{1}{8}$ inches long and $2\frac{5}{8}$ inches across the horns of the edge, is decorated on the faces between the flanges by five longitudinal rows of herring-bone pattern, the apex of the angles pointing



Fig. 2. Group of Relics belonging to Period II., the time of the Flat Bronze Axe. (1.)
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towards the cutting edge, punched with a short-edged chisel, and there are three closely set crescentic rows of punctulations running parallel to the cutting edge immediately in front of the herring-bone pattern and just where the fore ends of the flanges merge in the sides. The dagger is imperfect at the butt, and now measures $8\frac{1}{2}$ inches in length and $2\frac{1}{2}$ inches across the widest part. The tapering blade is slightly rounded at the point, and it is strengthened on each face by three narrow rounded ribs, the outer two converging towards the point. As the greater part of the butt is wanting, there is no indication of the number of rivet holes by which it was fixed to the haft.

Although the armlet from The Maidens has been described as penannular, and that from Auchnacree has at present a break of $\frac{1}{8}$ inch breadth in the ring, there is no doubt that originally the ends of the ring in both cases fitted closely together. Several armlets of this type have been found in Scottish Bronze Age graves. A beautifully patinated example flattened on the inside was found with a beaker in a cist under a small cairn at Crawford, Lanarkshire.¹ No break can be detected in the ring, but this may be hidden by its thick patina; still, should the ring be completely annular, it is known that such armlets were fashioned in Scotland during the flat bronze axe period, as a mould found at Marnoch, Banffshire,² had matrices for an armlet of this type as well as for a flat axe and a bar or ingot. Two well-patinated armlets, with the ends of the ring fitting closely together, were found in a cist with a food-vessel and human remains at Kinneff Castle, Kincardineshire,³ one of the rings being flattened on the inside (fig. 2, No. 8), and the other of circular section. Fragments of what seems to have been an armlet of the type under review, flattened on the inside, were found with a food-vessel in a gravel pit at Ratho, Midlothian.⁴ A thin pin and a Romano-British dress-fastener of bronze were found at the same place, and though this is suggestive of a mixing of periods, it is much more likely that the armlet was associated with the food-vessel than with the dress-fastener. Two armlets flattened on the inside were found in a small cairn with cremated bones at Stobo, Peeblesshire.⁵ No pottery is mentioned in this record, but although cremation is more characteristic of the time of the cinerary urn, there are a number of authentic records of food-vessels found in Scotland with incinerated bones.

With regard to the occurrence of knives, of which two (fig. 2, Nos. 4 and 5) appear in the Auchnacree flat axe hoard, it may be recalled that

¹ *Proceedings*, vol. xvi, p. 147.

² *Archæologia Scotica*, vol. v., app., p. 27.

³ *Proceedings*, vol. ii, p. 276.

⁴ *Ibid.*, vol. xxxviii, p. 500.

⁵ *Museum Catalogue*, EQ, 157.

the larger of these had a thin flat blade, $6\frac{1}{2}$ inches in length, and tapering to a rounded point, which had been fixed to the haft by nine rivets. A broad, thin flat knife with a rounded point and two rivet holes, 6 inches in length, and a thin fillet of gold corrugated lengthwise which had ornamented the haft (fig. 2, Nos. 6 and 6A), were found amongst burnt bones in the gravel under a large cairn at Collessie, Fife. A beaker was found in a cist at the centre of the cairn, and another in the gravel under it.¹ Fragments of a thin flat blade and a stone bracer or wrist-guard were found with a beaker at Callachally, Glenforsa, Mull.² Another bracer (fig. 2, No. 14), it may be mentioned, was found with a beaker at Fyrish, Evanton, Ross-shire.³

Three other thin flat knives with rounded points have been found in short cists which, although they did not contain urns, probably belonged to the time of the beaker or the food-vessel. One, $3\frac{1}{16}$ inches long, was found in a short cist with a cup-marked cover stone at Letham Quarry, near Perth, along with unburnt human remains, two bone pins, one of which is shown in fig. 2, No. 18, and part of a bone ornament (fig. 15, No. 2);⁴ another, which measured $3\frac{1}{8}$ inches long, was found with two thin gold discs (fig. 16) at Barnhill, Broughty Ferry, Forfarshire;⁵ and the third, which measured $5\frac{7}{8}$ inches in length and had four rivet holes, was found with unburnt human remains and a narrow, corrugated fillet of gold for encircling the haft, in a cist in a large cairn at Skateraw, East Lothian.⁶ A similar mounting of gold was found with what seems to have been a food-vessel at Monikie, Forfarshire.⁷

So far we have dealt only with plain, flat, round-pointed blades, but there remain two examples of a different variety which, while they are thin and flat, are sharp pointed, triangular in shape, and provided with narrow ribs. These being strengthened by longitudinal ribs seem quite suitable for stabbing, and may be termed daggers. One, which is $6\frac{3}{4}$ inches long and has six rivet holes, was found with incinerated bones in a cist in a cairn at West Mains of Auchterhouse, Forfarshire.⁸ Its haft of ox-horn, broken and split into fragments, was recovered, and it had a triple reeded midrib running from the butt to the point. The other, 9 inches in length, which has four rivet holes and a central rib and two others converging from the butt towards the point (fig. 2, No. 7), was found in a short cist in a cairn at Blackwaterfoot, Arran.⁹ A thin fillet of gold, corrugated longitudinally, which had ornamented the hilt (fig. 2, No. 7A) was recovered with this blade. Although no pottery was found

¹ *Proceedings*, vol. xii. p. 440.

² *Ibid.*, vol. vi. p. 233.

³ *Ibid.*, vol. xxi. p. 321.

⁴ Anderson, *Scotland in Pagan Times—Bronze and Stone Ages*, p. 66, figs. 76 and 77.

⁵ *Proceedings*, vol. xxxii. p. 205.

⁶ *Ibid.*, vol. ix. p. 537.

⁷ *Ibid.*, vol. xxxi. p. 181.

⁸ *Ibid.*, vol. xxvii. p. 7, fig. 1.

⁹ *Ibid.*, vol. xxxvi. p. 118.

in these two graves or in three mentioned in the last paragraph, it is more likely that they belonged to the period of the beaker or food-vessel than to that of the cinerary urn, as the latter is not often found in cists in Scotland, while the two former are very frequently found in them. The presence of the midrib on a flat blade may suggest a later development and a later period for the objects so provided than for those with a plain flat blade. But as both types of implements have been found in similar burial structures, and with similar mountings of gold for their hafts, it is very probable that they belong to the same period, the one being meant primarily for cutting and the other for stabbing.

Only one hoard, from Sluie, Morayshire, shows the flat axe associated with the halbert; but this association is well established in Ireland and England. Of the three hoards which contained only halberts, two of them yielded three examples, and the third is believed to have consisted of five, though only three seem to have survived.

The remaining classes of relics found in association with the flat axe are the cordoned armlet, the ear-ring, the jet button, hollow conical bosses, and a necklace of tubular beads of bronze, the last two having been found only in one hoard, that from Migdale. An armlet somewhat similar to the cordoned armlet in this find was discovered in a short cist at Williamston, near Perth.¹ In addition to the relics already mentioned from Migdale was part of a band of bronze doubled up, which possibly had been an armlet and was ornamented with oval projections resembling those on the armlets (fig. 2, No. 9) found with a jet necklace in a short cist at Melfort, Argyll.² As for ear-rings, two of gold, one of which (fig. 2, No. 13) is preserved in the National Museum, were found in a short cist at Orton, Morayshire.³

The jet buttons with V-shaped perforations found in the Migdale hoard show that these objects were contemporary with the flat bronze axe. But three examples found in direct association with pottery have been recorded from Scotland; these (fig. 2, No. 19) were found with the fragments of a cinerary urn set round with boulders on the summit of a small wooded knove at Old Windymains, Keith Marischal, East Lothian.⁴ Near this urn, in the centre of the summit, was a short cist containing a skeleton in a crouching position, and the remains of an urn, possibly of the food-vessel variety, as it was estimated to have been about 6 inches in height. Buttons of this type have been found in England with beakers and food-vessels.

As this class of button is found in the second period, the Keith

¹ *Proceedings*, vol. liii. p. 19.

² *Ibid.*, vol. viii. p. 28.

³ *Ibid.*, vol. xix. p. 135.

⁴ *Ibid.*, vol. xxxiii. p. 68.

Marischal discovery raises the question whether the cinerary urn was made at this early time. Montelius has so placed it, and, if he is correct, it must have been almost contemporary with beakers and food-vessels. But, as it is quite probable that the buttons in this deposit may have been associated with the cist burial, or that they continued into later times, further evidence is required to justify us in allotting the Scottish cinerary urn to the second period.

Seven of the hoards containing axes come from the north and north-east of Scotland and only two, those from Ayrshire and Renfrewshire, from the south; but the three halbert hoards are better distributed—from Sutherland in the north, Aberdeenshire in the north-east, and Bute in the south-west. The distribution of the flat axe hoards is much the same as that of the flat axe moulds, as of the former one was found in Sutherland, one in Ross-shire, one in Nairnshire, one in Morayshire, two in Banffshire, and one in Forfarshire; while of the latter one came from Ross-shire, two from Morayshire, one from Banffshire, and four from Aberdeenshire.¹

It has been noted that several small mountings of gold have been found with some of the smaller implements of this period. In addition to these, a few more ornaments made of this precious metal which belong to this time have been found in Scotland. They include four of the crescentic objects known as lunulæ which have frequently been found in Ireland, and which, on the strength of the discovery of two examples with a flat bronze axe at Harlyn Bay, Padstow, Cornwall,² have been placed in this early period. The gold ear-rings (fig. 2, No. 13) found at Orton, Morayshire, probably belong to this time, as they were found in a cist, and examples of this class of ornament in bronze (fig. 2, No. 11), though not so elongated transversely, were found in the Migdale hoard.

Illustrated in fig. 2 are a number of relics which, although not found in the hoards, belong to this period. Necklaces formed of beads and plates of jet, of the forms Nos. 20-26, have frequently been discovered with beakers and food-vessels.³ The bronze armlet, No. 9, was found in a cist with a jet necklace at Melfort, Argyll; the stone hammer, No. 15, with a food-vessel at Doune, Perthshire; the axe-hammer, No. 16, in a cairn at Hagg Wood, Foulden; and the flint arrow-head, No. 17, is one of four found with a beaker at Dairsie, Fife.

¹ *Proceedings*, vol. xxxviii. p. 492, and vol. xl. p. 35.

² *Arch. Journal*, vol. xxii. p. 276; *Antiquaries Journal*, vol. i. p. 294, and vol. ii. p. 96.

³ *Proceedings*, vol. i. p. 238.

PERIOD III.—FLANGED AXES AND PALSTAVES.

Of the period of the flanged axe and palstave are seven hoards, two consisting entirely of rapier blades. But before considering this group of relics it will be as well to state which are treated in this paper under the terms of flanged axes and palstaves. One hoard, that from Gavel Moss, which contained two axes with slight flanges, has been included in the previous period. My reason for doing so is that these axes in their general outline resemble more closely that of the best developed flat axe than of the flanged axe proper or the palstave. Both of the latter tools have a much shorter cutting edge than the normal flat axe or the slightly flanged axe. Also when the faces of the slightly flanged axe are ornamented, the technique and designs are those seen on the flat axe and not on the flanged axe or palstave. In the former there are rows of short lines, zigzag, and herring-bone patterns incised or punched, in the

Number.	Where Found.	Flanged Axes.	Palstaves.	Spear-heads with Loops.	Rapier Blades.	Razors	Miscellaneous Relics.	References.
PERIOD III.—FLANGED AXES AND PALSTAVES.								
1	Balcarry, Wigtownshire	..	3	..	..	..	..	<i>Proceedings</i> , vol. xiv. p. 131.
2	Glentrool, Kirkcudbrightshire	..	1	1	1	2	1 tanged knife, 1 tore, 1 pin, 4 chisels, small plate with two perforations, 1 glass bead, more than 13 amber beads.	<i>Ibid.</i> , vol. lv. p. 29 and lvi. p. 20.
3	Caldons Hill, Stoneykirk, Wigtownshire.	1	7	..	..	..	..	<i>Ibid.</i> , vol. xl. p. 11.
4	Craig-a-Bhodaich, Farr, Sutherland.	..	2	..	..	..	..	<i>Ibid.</i> , vol. xliii. p. 240.
5	Kirkgunzeon, Kirkcudbrightshire.	..	..	..	3	..	..	<i>Ibid.</i> , vol. xxii. p. 376.
6	Drumcoltran, Kirkcudbrightshire.	..	..	..	6	..	..	<i>Ibid.</i> , vol. xlviii. p. 333.
7	Traprain Law, East Lothian.	..	..	..	..	..	5 chisels.	<i>Ib d.</i> , vol. liv. p. 71, fig. 8.

latter the ornamentation consists of raised patterns of simpler form made when casting the implement. Montelius, it may be mentioned, adopts this classification, as axes with low flanges, sometimes with cable moulding on the sides, are included in his second or flat bronze axe period.¹ Under the term flanged axe in this group are included those examples with broad flanges which are usually of triangular shape, the apex being placed slightly behind the centre of the axe; they may or may not have an abrupt stop-ridge of greater or less size placed at right angles to and between the flanges (fig. 3, Nos. 1 and 2). Under the term palstave are included those axes with well-developed flanges, but which have the after part of the axe between the flanges much thinner than the front part, the stop being provided by a sharp curved slope or step instead of an abrupt stop-ridge (fig. 3, No. 3); also axes in which the flange, much reduced in width, curves round to form the stop (fig. 3, No. 4); this second sub-variety is usually provided with a loop on one side, no Scottish examples being known, so far as I can learn, with a loop on both sides. If we may judge from the number of examples in the National Museum, the palstave does not seem to have been a popular tool in Scotland, though the discovery of several moulds for casting them indicates that they were made in the country. In the National Museum there are twenty examples with slight flanges, which I have placed in the second period, and forty-five with well-developed flanges and no stop-ridge, twenty-six with similar flanges and narrow stop-ridge, eight palstaves with prominent flanges and fifteen with less prominent flanges curving into the stop, provided with a single loop, which go into the third period. I do not know of any Scottish winged axe of the type found on the Continent and occasionally in England, that is, the type with prominent flanges placed close to the butt-end and bent over so as to form a kind of double socket; neither have I ever heard of a Scottish socketed axe which retains the memory of the wings as a decorative motive.

The three axes from Balcarry, and the one from Glentworth, Kirkcudbrightshire, are palstaves of the first described variety, the early type; while the two from Farr, Sutherland, and five from Caldonshill, belong to the second described variety, each having a single loop. One of the Caldonshill lot is a flanged axe without a stop-ridge of early form, which had survived to the time of the fully developed palstave,² and it is the only example of the flanged axe in this group of hoards.

¹ *Archæologia*, vol. lxi. p. 97.

² Five of the axes from this hoard are in the National Museum, and there is another in Glasgow. Two more are understood to be in private hands in Wigtownshire, but I have not seen them, and it is believed that several others still survive.

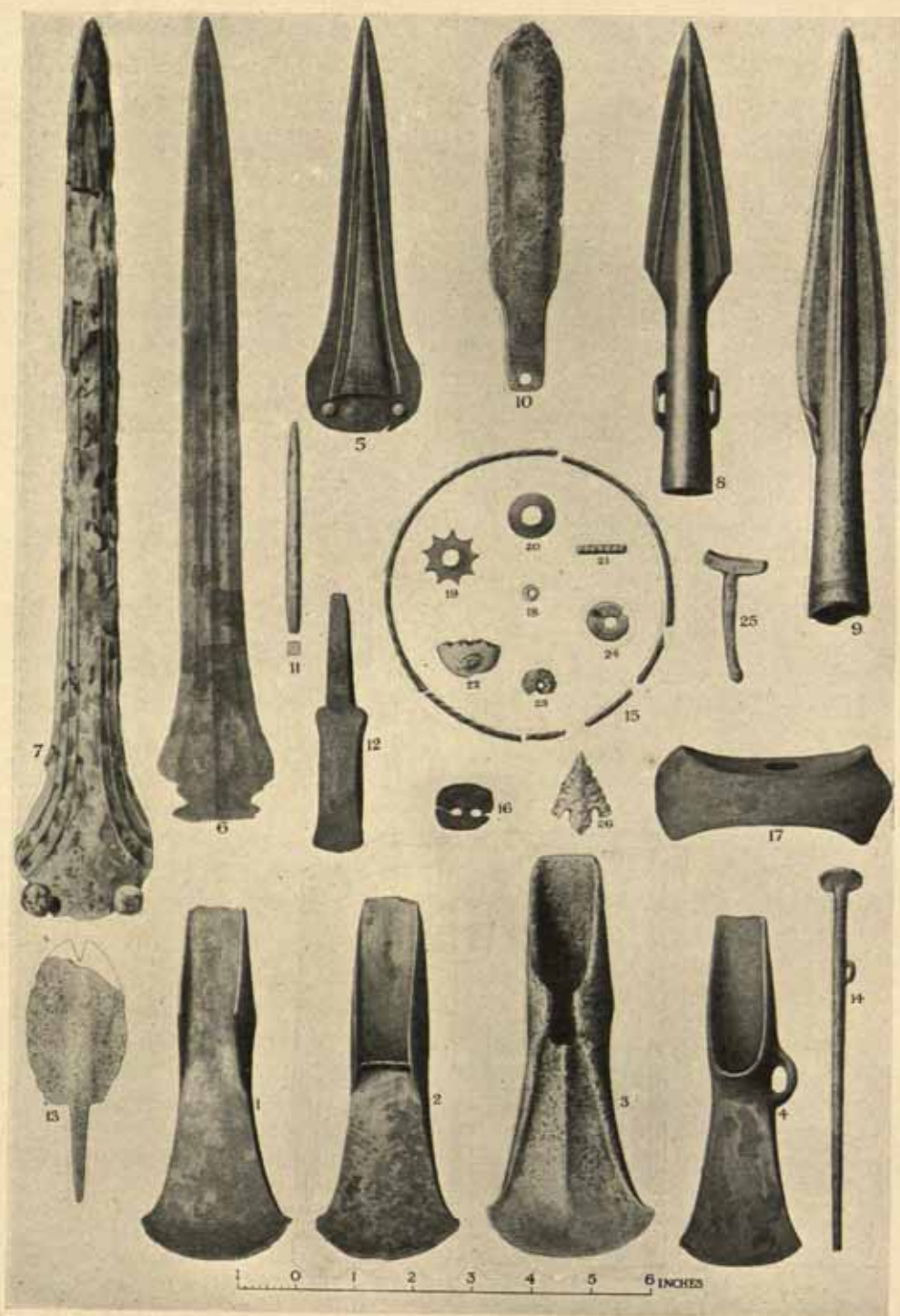


Fig. 3. Group of Relics belonging to Period III, the time of the Flanged Axe. (1.)

Associated with the Glentrool axe (fig. 3, No. 3) were a rather broad rapier blade (fig. 3, No. 7), a spear-head with small loops at the base of the wings of the blade (fig. 3, No. 9), a tanged knife of unusual form (fig. 3, No. 10), two razors with bifid blades (fig. 3, No. 13), four small chisels or punches (fig. 3, No. 11), a massive disc-headed pin with a loop on the stem (fig. 3, No. 14), fragments of a torc of twisted wire (fig. 3, No. 15), a small oval plate with two perforations placed on one side of, but parallel to, the medial line (fig. 3, No. 16), at least thirteen amber beads generally of discoid or oblate form (fig. 3, Nos. 22-24), and a small bead of translucent blue glass (fig. 3, No. 18).

The rapier blades from Kirkgunzeon and Drumcoltran, both in the Stewartry of Kirkeudbright, are fine castings, the blades being slender and fluted.

No Scottish Bronze Age hoard exhibits such a variety of types of objects as that from Glentrool. It established the contemporaneity in Scotland of the early type of palstave with the spear-head with loops on the socket at the base of the blade; an early variety of the rapier and razor, the latter not yet having developed the perforation below the notch in the tip of the blade; an early form of torc, possibly to be distinguished by the thinness of the wire of which it is formed, and the massive pin with a loop on the stem. Small chisels like those found in the hoard may have been known during the period of the flat bronze axe, as some such tool would be required to form the herring-bone patterns which are seen on some of them, and probably they may have lasted into the period of the socketed axe. The group of five small chisels found together in the fort on Traprain Law, although placed in Period III., may easily have belonged to later times, as most of the Bronze Age relics found on the hill belong to Period IV. Regarding the amber beads, such ornaments were known in Scotland during the time of the flat bronze axe, Period II., as they have been found with a jet necklace and part of a food-vessel at Rothie-Norman, Aberdeenshire,¹ and they continued to be prized throughout, and after the close of, the Bronze Age.

The presence of the glass bead in the Glentrool find is of special importance, as it may assist us in determining which implements and weapons were contemporary with certain varieties of the cinerary urn. In 1891, a burial cairn was excavated on the farm of Gilchorn, Forfarshire,² when a large inverted cinerary urn was found containing an incense cup and incinerated bones. In the cavity from which the urns had been extracted was a small oval bead of whitish glass (fig. 4). A second large cinerary urn was also found in a broken condition, and



Fig. 4. Glass Bead, Gilchorn. (f.)

¹ *Proceedings*, vol. vi. p. 218.

² *Ibid.*, vol. xxv. p. 447.

in the soil beneath it a small leaf-shaped blade of bronze about 3 inches in length with a slight midrib, and a deep notch on each side at one end for fixing it to the haft (fig. 5). Fragments of two more small bronze implements with flat blades, probably knives or daggers, were found under the centre of the cairn in a cavity which seemed to have been rifled at some previous time. In this record we find two large cinerary urns with an incense cup, a small glass bead, and a little bronze implement provided with a peculiar device for the attachment of the haft. This arrangement, two deep notches at the butt-end of the object, occurs on a short broad rapier blade or long dagger blade found in the river Cree, Kirkcudbrightshire (fig. 3, No. 6), which is preserved in the National Museum, and is well known in English and Irish examples. The occurrence of a glass bead in the Glentool hoard and in the Gilchorn group of relics (the first containing a rapier blade and the second two cinerary urns of a pronounced type, as well as a small bronze instrument which was fixed to its haft in the same way as certain rapier blades) permits of the suggestion that the cinerary urn with a heavy overhanging rim was contemporary with the bronze rapier blade in Scotland. It must be admitted that the evidence is slight and that the deductions are not conclusive, but pending further information on this very obscure subject, the possibility of these objects being contemporary should be considered.



Fig. 5. Bronze Blade from Gilchorn. (4.)

Relics found with Scottish cinerary urns do not help us very much in ascertaining the chronological position of the pottery relative to that of the weapons and implements of its period. In addition to the Gilchorn discoveries, thin, flat bronze blades have been found with cinerary urns at Stobshiel, East Lothian,¹ at Shuttlefield, Lockerbie, Dumfriesshire (fig. 6),² at Cambusbarron, Stirlingshire, where a stone hammer was also found,³ and at Standing Stones, New Deer, Aberdeenshire, with an incense cup;⁴ but as generally only small portions of them remain, it is impossible to determine the true character of the implements or to which of our periods the pottery belongs.

Perforated stone hammers or axe-hammers have been found in a number of sepulchral deposits in Scotland, but as their use seems to have extended over a long period of time—from the Neolithic well through the Bronze Age—they do not advance our inquiries much further.

¹ *Proceedings*, vol. xvi, p. 475.

² *Ibid.*, vol. v, p. 213.

³ *Ibid.*, vol. xiv, p. 280.

⁴ *Ibid.*, vol. xxxv, p. 258.

A stone hammer was found in the horned chambered cairn at Ormiegill, Caithness,¹ and another with neolithic pottery and three fine flint knives in the segmented chambered cairn at Tormore, Arran,² which belong to neolithic times. One was found with a food-vessel under a cairn at Glenhead, Doune, Perthshire,³ while one was found in a cist with unburnt human remains at Cleughhead, Glenbervie, Kincardineshire.⁴ An axe-hammer was found on the original surface under a cairn, which yielded up two food-vessels and several flint knives and a scraper at the Hagg Wood, Berwickshire.⁵ A hammer as already noted was found with a cinerary urn and a small fragment of a flat bronze blade at Cambusbarron, Stirlingshire; and another with at least nine cinerary urns, of which seven were plain unornamented vessels and two had heavy overhanging rims, at 63 Nelson Street, Largs,⁶ in 1908 and 1909. Axe-hammers have been found with or near cinerary urns in a stone circle at Crichtie, Kintore, Aberdeenshire;⁷ at Oban, Argyll (fig. 3, No. 17);⁸ at Lawfield, Kilmacollm, Renfrewshire;⁹ at Glengyre, Wigtownshire;¹⁰ and at the Fossil Grove, Whiteinch, Glasgow.¹¹

Probably some of these hammers and axe-hammers belong to the next period, that of the socketed axe, as some of them have been found with cinerary urns having heavy overhanging rims—a type of vessel found also with the small oval bronze blade decorated on both faces with lozenge designs which, we shall see later, was contemporary with socketed axes.

Another class of stone objects which must have been in general use ever since the working of metals began is the whetstone; but extremely few of these instruments have been found in Scotland directly associated with relics of the Bronze Age, although numbers probably dating to this period have been found in many parts as casual finds. In the National Museum are two stone objects found at Easter Cairnhill, Peeblesshire (fig. 7, No. 1), and Castle Menzies, Perthshire, $4\frac{5}{16}$ inches by $1\frac{5}{16}$ inch by $1\frac{7}{16}$ inch, and $3\frac{3}{4}$ inches by $\frac{3}{4}$ inch by $\frac{5}{16}$ inch, flat on one side and rounded on the other, with semicircular ends, which probably have been used as whetstones. As a similar object was found



Fig. 6. Bronze Blade from Shuttlefield. (1.)

¹ *Proceedings*, vol. vii. p. 490.

² *Ibid.*, vol. xvii. p. 452.

³ *Ibid.*, vol. xlviii. p. 316.

⁴ *Proceedings*, vol. xviii. p. 319.

⁵ *Supra*, p. 104.

¹¹ *Ibid.*, p. 105.

⁶ *Ibid.*, vol. xxxvi. p. 100.

⁷ *Ibid.*, vol. xii. p. 609.

⁸ *Archæologia*, vol. lxii. p. 239.

⁹ *Ibid.*, vol. xxxii. p. 58.

¹⁰ *Ibid.*, pp. 98 and 102.

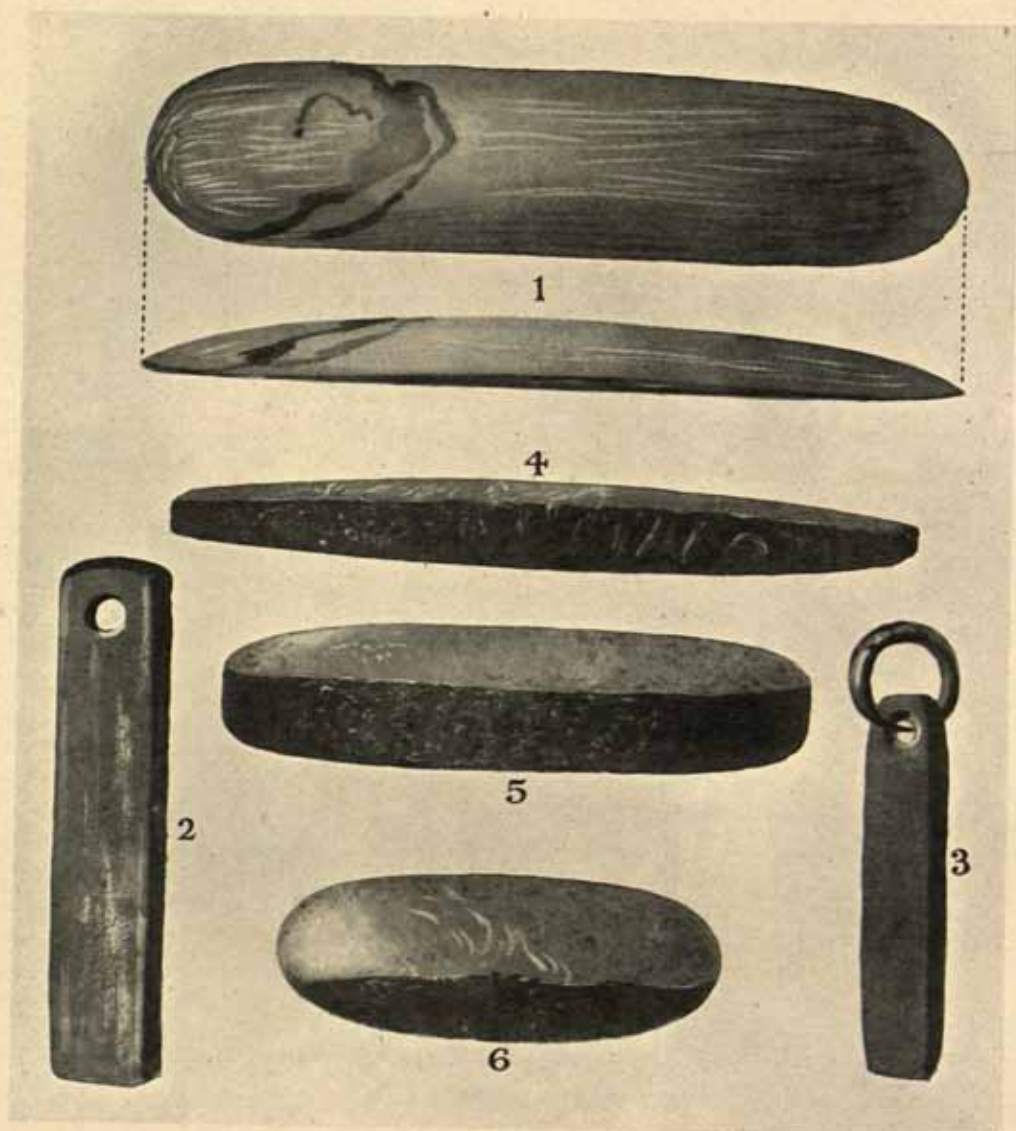


Fig. 7. Whetstones: (1) from Easter Cairnhill; (2) from Glenluce Sands; (3) from North Uist; (4) from Glendhu, Sutherland; (5) locality unknown; (6) from Torries, Oyne, Aberdeenshire. (†).

in a barrow at Rudstone, Yorkshire,¹ with a human skeleton, and jet buttons with V-shaped perforations, this type of instrument may be assigned to our second period. Besides this type of whetstone there are numerous Scottish examples, beautifully fashioned, of reddish quartzite and other hard stones which seem to belong to the Bronze Age, some of them being perforated at one end. They are of small size, square or rectangular in section, and taper to the ends, which sometimes are rounded horizontally (fig. 7, Nos. 4-6). One of grey micaceous schist with an incomplete perforation at one end (fig. 8) was found in a cairn at Meiklerigg, Stenton, East Lothian.² In the cairn were two cists, one containing a cinerary urn with a heavy overhanging rim, and incinerated bones, and the other the remains of a skeleton, a well-flaked flint knife, and the whetstone. Another (fig. 7, No. 2) was found with the remains of a bronze dagger and incinerated bones in a cinerary urn on Glenluce Sands.³



Fig. 8. Whetstone from Meiklerigg, Stenton.

Although large numbers of whetstones, many of them very carefully made, have been found in the brochs, crannogs, earth-houses, and hill-forts of the Iron Age, those of the finely fashioned quartzite type are not included amongst them. In the National Museum we have a very large number of whetstones from such sites, but of these only one found in the fort of Dunadd, Argyll, resembles the quartzite examples in size and form, but it is made of schist. These little instruments were perhaps used more as burnishers for finishing off the bronzes than as mere sharpeners or whetstones. Less numerous are irregularly shaped, water-rolled pebbles of quartzite with worn facets on one or more edges, which may also have been Bronze Age burnishers: one of these was found in the fort on Traprain Law.

A large, cordoned cinerary urn found at Balneil, Wigtownshire,⁴ contained a crutch-shaped bone ornament (fig. 3, No. 25), a quoit-shaped bead of bluish vitreous paste (fig. 3, No. 20), and a bronze chisel with a broad blade ending in abrupt shoulders, above which is a stout square tang much narrower than the blade (fig. 3, No. 12). The chisel is of unusual if not unique form, and we cannot say definitely what was its period.

The bead of bluish vitreous paste is an important piece of evidence. Beads of this material more or less bleached, in the form of a star (fig. 3, No. 19), or segmented (fig. 3, No. 21)—that is, like a number of small beads stuck end to end—have been found three times with cinerary urns in Scotland. A segmented bead was found in a cinerary urn at Mill of

¹ *British Barrows*, p. 263, fig. 14.

² *Ibid.*, vol. xxii. p. 67.

³ *Proceedings*, vol. xiv. p. 221.

⁴ *Ibid.*, vol. i. p. 302.

Marcus, Forfarshire,¹ two were found with a star-shaped bead in one of the cinerary urns found in a cairn on the Stevenson Sands, Ayrshire,² and a star-shaped example was recovered from a cinerary urn at Pitdoulzie, Auchterless, Aberdeenshire.³ Segmented beads closely resembling the Scottish examples in shape and colour and described as of bluish faience have been found in graves in the south of England, and have been claimed as imports from Egypt. Whether this is correct or not, I do not think there is much doubt that the Scottish beads were manufactured in Scotland. They are not made of faience but of vitreous paste, and the smaller ones are translucent. I cannot learn of any star-shaped beads of the Scottish type having been found in Egypt, while they have been found in widely separated parts of our country. In addition to those found with cinerary urns other star-shaped beads have been picked up as surface finds in Morayshire, Aberdeenshire, Perthshire, and Wigtownshire,⁴ and segmented beads in Morayshire, Ayrshire, and Wigtownshire.⁵ Several quoit- and star-shaped beads have been found in Ireland.⁶

Only one of the hoards of the third period comes from the north of Scotland, from Sutherland, the most northerly county on the mainland, and five of the remaining six, which include the two consisting solely of rapier blades, from the adjoining counties of Wigtown and Kirkcudbright, in the extreme south. When we consider the small number of palstaves found in Scotland compared with that of flanged axes, and the distribution of the hoards, it might be suggested that the palstaves were imported from Ireland, which lies only about twenty miles from the Wigtownshire coast. But this does not follow, as halves of three moulds for axes of this period have been discovered in the country. Still they do not help us very much in clearing up this point, as two are incomplete and one is of quite an abnormal if not unique type. One of the first two, which shows only the front portion of the blade, comes from Eildon Camp, Roxburghshire, in the south-east, and the other, which also shows only the front part but which may have been for casting palstaves, is believed to have been found in Orkney, in the far north; the third mould from Glengyre, Wigtownshire,⁷ would produce an axe-like object of palstave form, only instead of having hollows on the faces near the butt-end between the wings, it would have projections increasing in size from the butt-end to a short distance in front of the centre, these projections having rounded terminals facing the cutting edge, so that it is impossible to understand their purport or how the implement was fixed to the haft.

¹ *Proceedings*, vol. xxiv. p. 470.

² *Ibid.*, pp. 33, 387.

³ *Supra*, p. 105.

⁴ *Ibid.*, vol. xl. p. 387.

⁵ *Ibid.*, p. 399.

⁶ *Ibid.*, p. 36.

⁷ *Ibid.*, p. 38.

Though no objects of gold appear in this group of hoards, a coiled armlet of this metal belonging to this period, formed by twisting three wires together, welding the ends and turning them back about two inches, was found at Slateford, Midlothian (fig. 18), and one of nearly similar shape with three palstaves at Grunty Fen, Cambridge.¹ The English example, however, is of cruciform section. What seems to have been a gold torc of the Glentool variety was found in a damaged condition in a stone circle at Leys, near Inverness.²

PERIOD IV.—THE SOCKETED AXE.

Forty-nine hoards belong to the time of the socketed axe (fig. 9, Nos. 1-3), the commonest types of weapons appearing in them being the socketed axe itself, the spear-head without loops but with pin holes in the socket (fig. 9, Nos. 7 and 8), and the sword (fig. 9, Nos. 4 and 5). Of the many varieties of relics which are mentioned in this list of hoards, all but one—the bronze shield, which occurs alone in three different finds—have been found either in direct association with these axes, or with types of relics found in other deposits with them; so there is no doubt that with the exception of three or four varieties of relics, which must be considered survivals from an earlier time, all of them belong to the period under review.

Four of the hoards consist only of socketed axes; in other nineteen these implements occur in association with other objects. In eight hoards they have been found with only one other type of relic, namely, in three with spear-heads, in two with swords, in one with a knife, in one with razors, and in one with penannular armlets with expanding terminals. In the last-mentioned hoard, from Rehill, Premnay, nine axes and a number of armlets were found, but only one of the former and two of the latter are now traceable, these objects having been placed in the National Museum. At Balmashanner, Forfarshire, an imperfect socketed axe was found with twelve penannular armlets of the type just described, ten bronze rings without a break in them, varying from $\frac{3}{4}$ inch to $3\frac{1}{8}$ inches in external diameter, the greater part of a bowl of cast bronze (fig. 9, No. 26),³ four penannular hollow gold ornaments of triangular section, three small penannular ornaments of bronze covered with gold foil, thirty-one amber beads and four jet beads. In the hoard from Poolewe, Ross-shire, five axes were discovered with a cauldron ring, a hollow ring, 2 inches in diameter, and a penannular ornament

¹ *Cambridge Antiq. Soc. Proc.*, vol. xii. p. 96; *Archæologia*, vol. lxi. p. 131.

² *Prehist. Ann. of Scotland*, vol. i. p. 163.

³ A similar bowl was found at Ardoe, Aberdeenshire.—Abercromby, *Bronze Age Pottery*, vol. ii. p. 21, pl. cviii. O. 7.

Number.	Locality where Found.	Socketed Axes.	Spear-heads with Loops.	Spear-heads with Pin-holes.	Swords.	Chapes.	Gouges.	Curved Tools.	Razors.	Penannular Arm-lets.	Shields.
PERIOD IV.—SOCKETED											
1	Eildon Hills, Roxburghshire .	2	..	..	..	..	..	..	..	..	..
2	Gillespie, Old Luce, Wigtownshire.	3	..	..	..	..	..	..	..	..	..
3	Bells Mills, Dean, Edinburgh .	5	..	..	..	..	..	..	..	..	..
4	Traprain Law, East Lothian .	3	..	..	..	..	..	..	..	..	..
5	Balmashanner, Forfarshire .	1	..	..	..	..	..	..	..	12	..
6	Rehill, Premnay, Aberdeenshire.	9	..	..	..	..	..	..	..	2+	..
7	Poolewe, Ross-shire . . .	5	..	..	..	..	..	..	..	..	..
8	Gospertie, Fife	12 (a bout)		6	..	..	..	..	..	..	..
9	Castlehill, Forfar	4	..	1	..	..	..	..	..	..	..
10	Highfield, Dingwall, Ross-shire	4	..	2	..	..	..	..	..	..	..
11	Auchtertyre, Morayshire .	1	..	2	..	..	..	..	..	6	..
12	Inshoch, Nairnshire . . .	2	..	2	..	..	..	..	..	..	..
13	Monmore, Killin, Perthshire .	2	..	1	..	..	1	..	..	1	..
14	Torran, Ford, Argyll . . .	..	..	1	..	..	1	..	..	..	..
15	Adabrock, Ness, Lewis . . .	2	..	1	..	..	1	..	3	..	..
16	Cullerne, Findhorn, Morayshire	1	..	2	..	..	..	1	1	..	..
17	Wester Ord, Invergordon, Ross-shire.	(?)	..	..	..	..	..	1	..	..	..
18	Point of Sleat, Skye . . . .	..	..	2	1	..	..	1	..	..	..
19	Kilkerran, Ayrshire	4	..	..	1	..	..	..	..	..	..
20	Islay, Argyll	2	1	..	..	..	..	..	..	..	..
21	Grosvenor Crescent, Edinburgh	1	..	..	14or 15	..	..	..	..	..	..
22	Grassieslack, Daviot, Aberdeenshire.	1	..	..	1	..	..	..	..	..	..
23	Arthur's Seat, Edinburgh . .	1	..	..	2	..	..	..	..	..	..
24	Corsbie Moss, Berwickshire .	..	1	..	1	..	..	..	..	..	..
25	Murrayfield, Edinburgh . .	..	..	2	..	..	..	..	..	..	..
26	West of Scotland . . . . .	..	..	1	..	..	..	..	..	..	..
27	Haddo House, Methlick, Aberdeenshire.	..	..	..	4	..	..	..	..	..	..

Miscellaneous Relics.	References.	Number.
BRONZE AXES.		
..	<i>Proceedings</i> , vol. xlv. p. 418.	1
..	<i>Ibid.</i> , vol. lvi. p. 210.	2
..	<i>Ibid.</i> , vol. vi. p. 275.	3
..	<i>Ibid.</i> , vol. xxvi. p. 182.	4
10 bronze rings, 4 penannular gold objects of triangular section, 3 small penannular gold objects, 31 amber beads, 4 jet beads, part of a cast bronze bowl.	<i>Ibid.</i> , vol. i. p. 138.	5
..	<i>Ibid.</i> , vol. xiv. p. 45.	6
1 cauldron ring, 1 hollow ring, 1 penannular ornament with cup-shaped ends.	<i>Scotland in Pagan Times—Bronze and Stone Ages</i> , p. 147.	7
..	<i>Proceedings</i> , vol. ii. p. 65.	8
..	Smellie, <i>Account of S.A. Scot.</i> , pt. I. p. 54.	9
Fragments of ring of tin	<i>Proceedings</i> , vol. ix. p. 435.	10
1 large semi-tubular ring	<i>Scotland in Pagan Times—Bronze and Stone Ages</i> , p. 153.	11
1 tanged knife, 9 rings from 1 $\frac{1}{8}$ inch to 2 $\frac{1}{8}$ inches in diameter, 1 large semi-tubular ring.	<i>Proceedings</i> , vol. liv. p. 129.	12
..	<i>Ibid.</i>	13
1 chisel, 1 hammer, part of bronze bowl, 2 whetstones, 1 gold bead, 1 glass bead, 2 amber beads.	<i>Ibid.</i> , vol. xlv. p. 27.	14
..	<i>Ibid.</i> , vol. liv. p. 124.	15
2 rings, ornamented rod	<i>Ibid.</i> , p. 129.	16
1 pin with cup-shaped head	<i>Ibid.</i>	17
2 cauldron rings	<i>Ibid.</i> , vol. xix. p. 315.	18
1 halbert, 1 flanged axe	<i>Ibid.</i> , vol. xvi. p. 409.	19
1 pin, 1 ring, 1 small semi-tubular ring with loops behind.	<i>Ibid.</i> , vol. xiii. p. 320.	20
..	<i>Ibid.</i> , vol. xlvii. p. 450.	21
..	<i>Prehistoric Annals of Scotland</i> , vol. i. p. 351.	22
..	<i>Proceedings</i> , vol. lv. p. 17.	23
..	<i>Ibid.</i> , vol. xxvii. p. 7.	24
Ferrule with wide expanding butt	<i>Ibid.</i> , vol. xxviii. p. 237.	25
..	<i>Ibid.</i> , vol. xxii. p. 362.	26
		27

[illegible]

Miscellaneous Relics.	References.	Number.
BRONZE AXES—continued. 1 penannular gold object of triangular section 2 bronze pins 1 ring 1 inch in diameter 1 small blade, 1 point of a rapier, 1 cauldron ring 1 socketed knife 1 socketed knife .. 3 necklets, 3 small rings joined together by thin hooked bands.	<i>Proceedings</i> , vol. xiv. p. 316. <i>Glasgow Exhibition, 1911, Catalogue</i> , p. 880. <i>Proceedings</i> , vol. xxvii. p. 38. <i>Ibid.</i> , vol. vi. p. 252. <i>Ibid.</i> , vol. xxi. pp. 9 and 220. Murray Thriepland Collection. Preserved in Drumlanrig Castle. <i>Proceeding</i> , vol. xi. p. 121. <i>Glasgow Exhibition, 1911, Catalogue</i> , pp. 880 and 882. <i>Proceedings</i> , vol. xiii. p. 331. <i>Ibid.</i> , vol. xix. p. 328. <i>Ibid.</i> , vol. i. p. 181. <i>Ancient Bronze Implements</i> , p. 290. <i>Proceedings</i> , vol. xix. p. 327. <i>Ibid.</i> , vol. lvi. p. 360. <i>Ibid.</i> , vol. xxiii. p. 15. <i>Ibid.</i> , vol. lvi. p. 356. <i>Archæologia Scotica</i> , vol. iii. p. 44. <i>Proceedings</i> , vol. xxv. p. 135. <i>Ibid.</i> , vol. v. p. 165. <i>Ibid.</i> , vol. v. p. 165, and vol. viii. p. 393. <i>Ibid.</i> , vol. xxxii. p. 8.	28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49

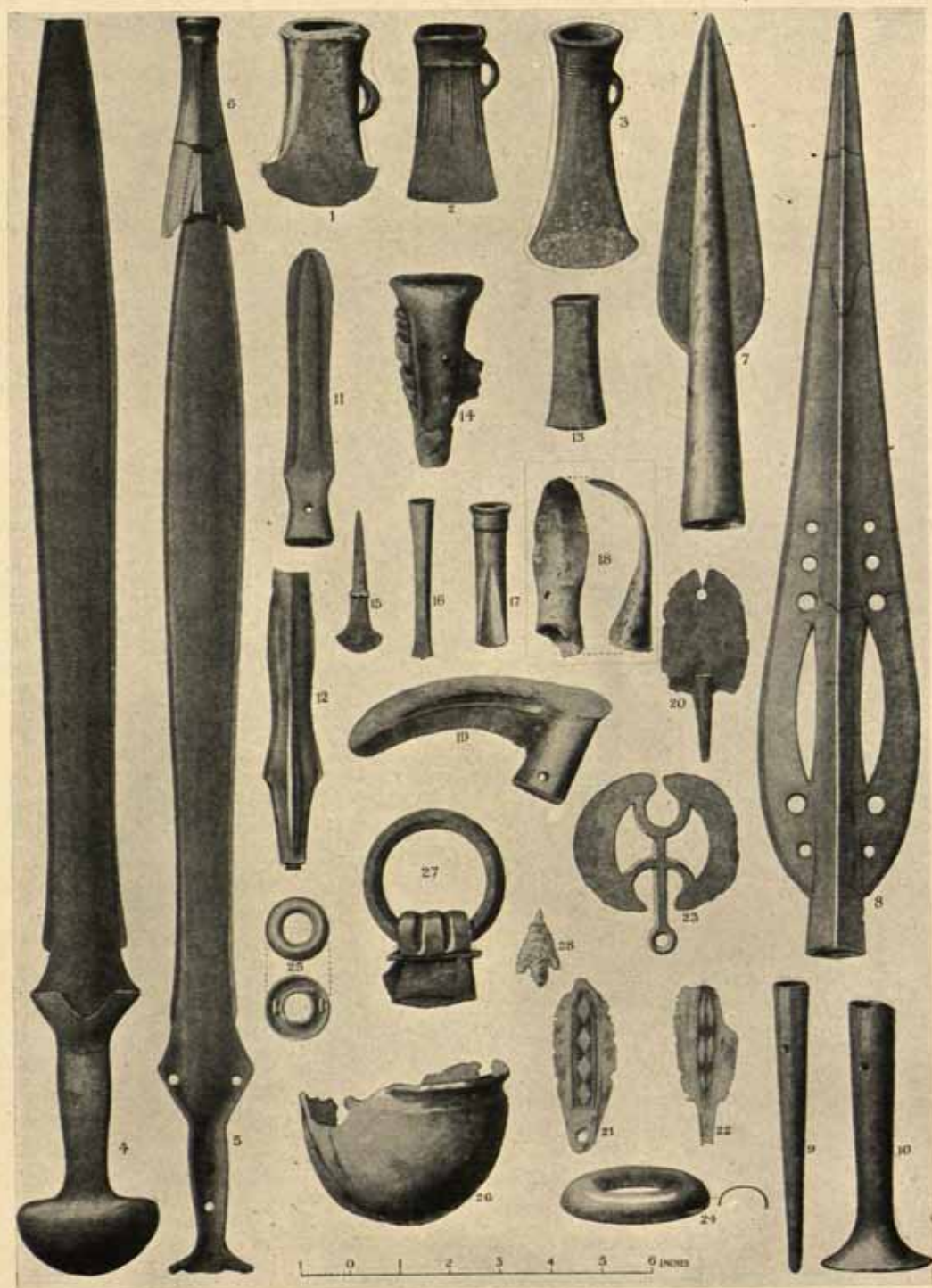


Fig. 9. Group of Relics belonging to Period IV., the time of the Socketed Axe. (ca. 5.)

of bronze with large expanding cup-shaped terminals, of the type so frequently found in Ireland made of gold.

At Auchtertyre, Morayshire, a socketed axe, two spear-heads with pin holes and six penannular armlets were found associated with fragments of a small ring of tin, and at Inshoch, Nairn, two similar axes and spear-heads with a semi-tubular ring, $2\frac{11}{16}$ inches in external

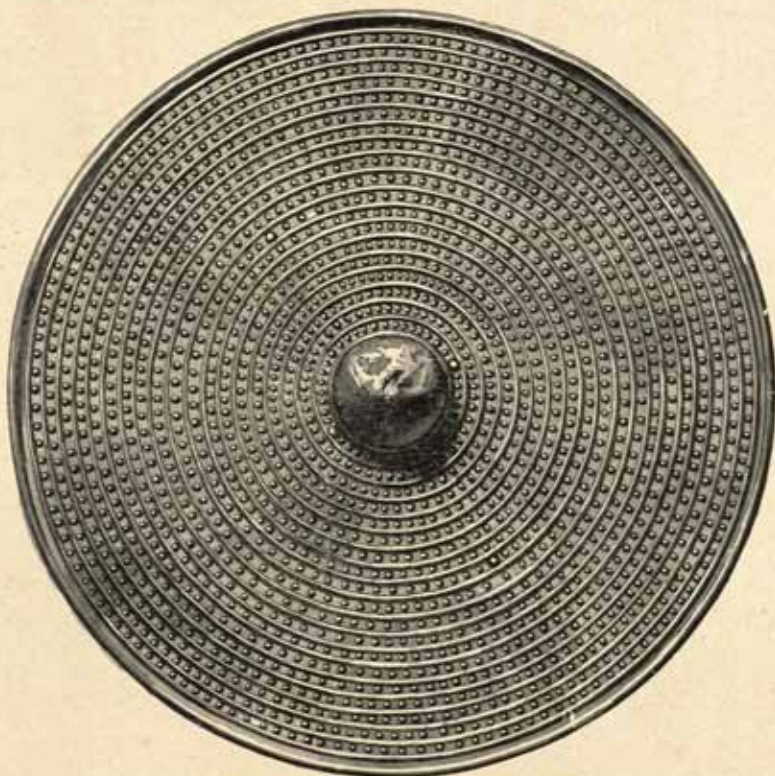


Fig. 10. Bronze Shield from Yetholm.

diameter and $\frac{1}{16}$ inch in breadth. This very unusual type of ring, of which the method of attachment is not apparent, looks like a hollow ring cut in half round the periphery. Uncommon though it may be, it is not the only example found in Scotland, as another, $2\frac{7}{8}$ inches in diameter and $\frac{1}{16}$ inch in breadth, was got at Monmore, Killin, Perthshire (fig. 9, No. 24), with two socketed axes, the greater portion of a knife with a rib on the medial line of the tang for fixing it to the haft (fig. 9, No. 12), a socketed gouge, a penannular armlet with expanding ends, and nine rings without a break, measur-

ing from $1\frac{3}{16}$ inch to $2\frac{1}{2}$ inches in diameter. The association of the gouge and socketed axe is seen again in the hoard from Adabrock, Lewis, which comprised two axes, one spear-head with rivet holes, a gouge, a tanged chisel (fig. 9, No. 15), the only bronze hammer (fig. 9, No. 13) found in Scotland, three razors with bifid blades, portions of a thin bronze bowl, two whetstones, one bead of gold, one of glass, and two of amber. One more gouge was found with a spear-head at Torran, Ford, Argyll. Another variety of relic, which like the gouge is a wood-worker's tool, is the small socketed and curved bronze blade with a midrib on the inside of the curve only; it also has been found with socketed axes. In the Cullerne, Morayshire, hoard were a socketed axe (fig. 9, No. 1), two spear-heads, one of these curved tools (fig. 9, No. 18), and a razor with a bifid blade; and in the hoard from Wester Ord, Ross-shire, axes (number not specified), a curved tool, two rings, and an ornamented rod of bronze. A third curved and socketed blade was found at the Point of Sleat, Skye, with two spear-heads, a sword, and a pin with a cup-shaped head. One hoard found at Kilkerran, Ayrshire, consisted of four axes, part of a sword, and two cauldron rings; another at Grosvenor Crescent, Edinburgh, consisted of one axe, fourteen or fifteen swords, the head of a disc-headed pin, the head bent over and lying parallel to the stem, a small semi-tubular mounting with two loops on the back (fig. 9, No. 25), and a ring, 3 inches in diameter, without a break in it. A hoard from the Island of Islay contained two socketed axes, a spear-head with loops, a flanged axe, or perhaps adze, as the cutting edge was parallel to the wings, and a halbert. Only one other spear-head with loops appears in the fourth group of hoards, and it was found with a sword, without notches on the edge of the blade, at Corsbie Moss, Berwickshire. We have seen that this class of spear-head has been assigned to the period of the palstave, and its occurrences with socketed axes and with an early sword points to the survival of an earlier type into a later period. The same might be said of the occurrence of the halbert with the socketed axe, but Mr W. Parker Brewis has drawn attention to a somewhat analogous hoard containing a halbert, a sword, and a spear-head found at Stoke Ferry, Norfolk,¹ and from these two discoveries suggests that the halbert blade survived into much later times than has been generally accepted. The imperforate bifid razor blades, which were found associated with perforated examples and socketed axes, in the Dunbar and Adabrock hoards, were possibly also survivals of early types into later times.

In addition to those hoards containing swords which have been discussed already, seven call for remark. Five of these contained chapes

¹ Evans, *Ancient Bronze Implements*, p. 270.

of the narrow-though not sharp-pointed variety. The hoard from the Clyde, near Renfrew, consisted of two swords and a chape; the one from Gogar House, Midlothian,¹ of a sword, a chape, and a hollow gold penannular ornament of triangular section; the one from Kilconan, Argyll, of five swords, a chape, and a socketed spear-head with rivet holes; that from Cauldhame, Brechin, of four swords (fig. 9, No. 5), a chape (fig. 9, No. 6), and a similar spear-head; and that from Ythsie, Aberdeenshire, of three swords, a chape, and two pins of the sunflower type. The remaining hoards from Kelton, Kirkcudbright, and Duddingston Loch, Edinburgh, consisted of a sword and a ring, $1\frac{5}{16}$ inch in diameter, in the former, and at least seven swords, twelve spear-heads, a small blade, the point of a rapier blade, and a cauldron ring (fig. 9, No. 27) in the latter. The last hoard contained only broken weapons; the spear-heads were all of large size, two of them having lunate openings in the blade, and one being of the barbed type with small lunate openings, the only specimen of its type recorded from Scotland, though occasionally met with in England. In a hoard from the west of Scotland a broken spear-head was found, with a ferrule for the butt-end of a shaft of most unusual shape, as it terminated in a round expanded foot (fig. 9, No. 10); and in one of the hoards from the neighbourhood of Forfar a socketed axe was found with a socketed knife.²

There remain only two more hoards containing bronze objects to be mentioned, and each contains a bifid razor. A razor with a perforation in the blade (fig. 9, No. 20) and a socketed knife (fig. 9, No. 11) were discovered in Quoykea Moss, Orkney, and a razor without a perforation was found at the Braes of Gight, Aberdeenshire, with six penannular armlets with expanding ends, three rings, about $1\frac{1}{8}$ inch in diameter, connected with each other by a thin band of bronze (fig. 11), and three extraordinary necklets, two of which have a plain penannular wire of circular section, terminating in a loop at each end carrying another ring (fig. 12), and the third, a ring of circular section which, when complete, had perforated projections placed at regular intervals round the necklet with a ring in each projecting loop (fig. 13).

Perhaps this last hoard should have been placed in the third period, as the razor, like those found with a palstave in the Glentrool hoard, had no perforation. But we have seen that in the two hoards from

¹ A penannular brooch of bronze was also found in the same sand-pit, but it seems to belong to a later period.

² In addition to the socketed knives mentioned from Forfar and Quoykea Moss, Orkney, the following examples have been found in Scotland:—One at Kilgraston, Perthshire (*Ancient Bronze Implements*, p. 206); one found with other bronze objects at Campbeltown, Argyll (*Prehistoric Annals of Scotland*, vol. i. p. 300); one from Clova, Aberdeenshire; one from Falkland, Fife; one from Little Crofty, St Andrews, Orkney; and another in the Clerk of Penicuik collection (*Proceedings*, vol. lvi. p. 357).

Dunbar and Adabrock, an imperforate razor was found with perforated specimens and socketed axes, and so the Gight example may be con-



Fig. 11. Bronze Rings conjoined from Braes of Gight. ($\frac{1}{2}$.)

sidered a survival into the later period of an early type, especially as it was associated with penannular armlets with expanded ends which

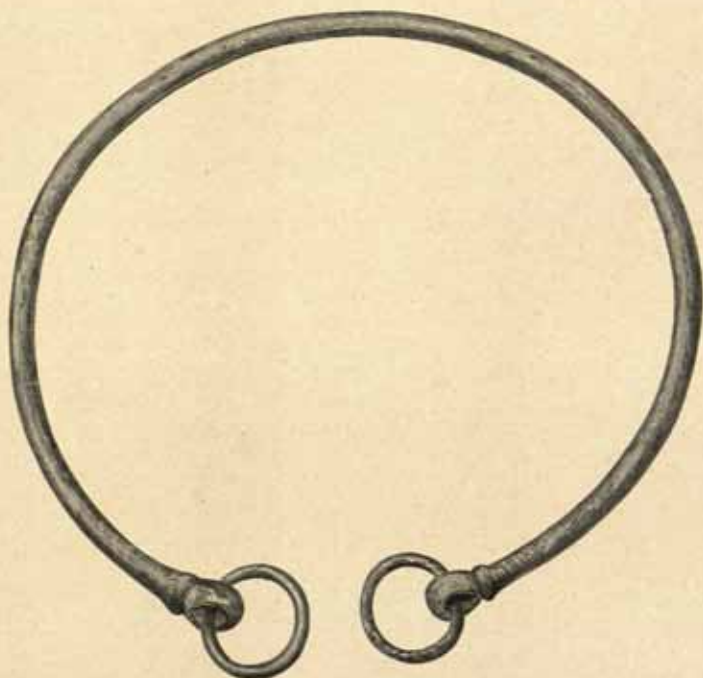


Fig. 12. Bronze Necklet from Braes of Gight. ($\frac{1}{2}$.)

have frequently been found in fourth-period hoards and, so far, never in those of the third period.

Reviewing this group of hoards, we see that socketed axes occur twenty-three times, spear-heads with pin holes fourteen times, swords twenty-two times, chapes five times, solid rings of various sizes without a

break in the ring five times, penannular armlets of ordinary types (fig. 14) five times, and shields, gouges, curved wood-workers' tools, and cauldron rings three times; besides these, many other classes of relics occur once or twice.

Although there is no satisfactory Scottish record of any of the types of weapons or implements mentioned in the last paragraph having been found in direct association with pottery, a number of distinctive little

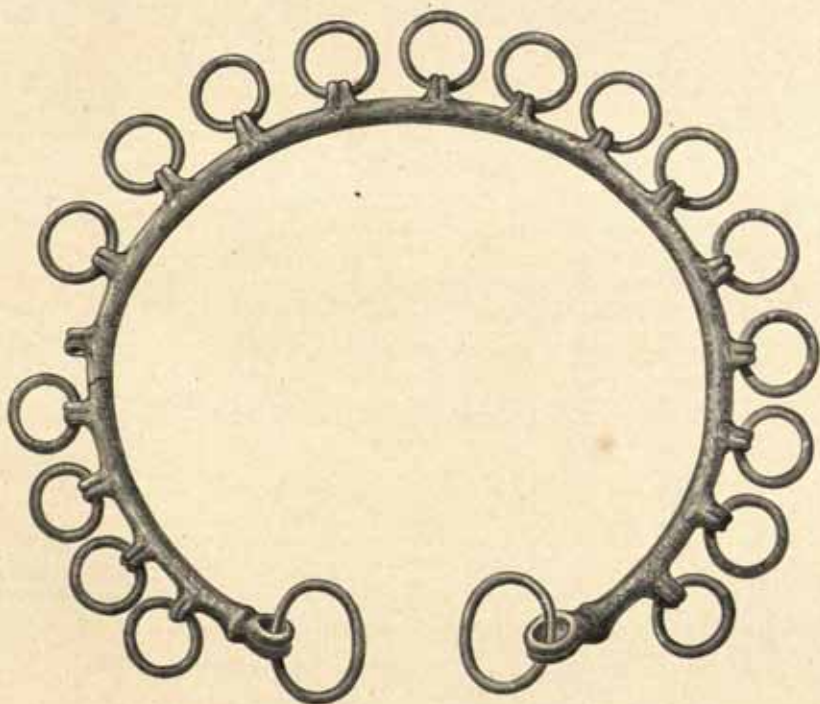


Fig. 13. Bronze Necklet from Braes of Gight. (½.)

instruments of bronze have not infrequently been found with cinerary urns. These are the delicate, thin, oval blades, decorated on both faces with incised lozenge designs, hatched and plain, and having a tang for fixing the haft, or a rivet hole in the base instead. None of them has been found in the hoards. One was found in a cinerary urn at Magdalen Bridge, Midlothian; two at St Andrews, Fife; one at Shanwell, Kinross (fig. 9, No. 21); and one at Balblair, Sutherland, under similar circumstances. One was discovered in a cairn at Lierabol, Sutherland, and another in a cairn at Rogart (fig. 9, No. 22), in the same county. The only English example known to Sir John Evans was one found with a

socketed hammer, a socketed axe, twelve palstaves, and other objects at Taunton.¹ Montelius, it may be stated, places these instruments in his fourth period, the time of the sword without notches and the socketed axe. The urns with which the Scottish examples were found are either of the type with the heavy overhanging rim, or encircled with one or more cordons.

Although none of the larger bronzes can be directly associated with the cinerary urn, it is possible to connect two of their contemporary ornaments, the penannular armlet and the small penannular ornament of gold, with this class of pottery. Two penannular armlets and three small penannular ornaments (fig. 20), all of gold, were found in a plain flower-

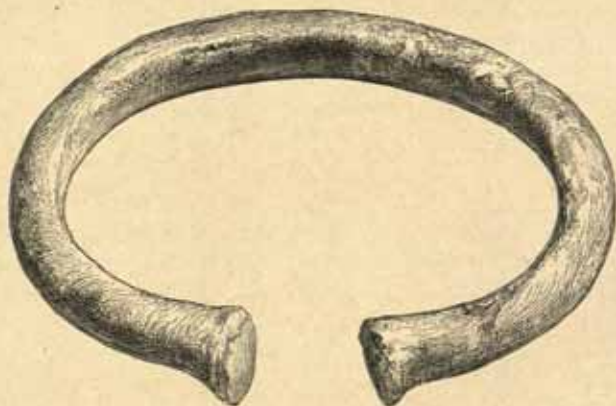


Fig. 14. Bronze Armlet from Auchtertyre. (J.)

pot-shaped cinerary urn, only 6 inches in height, and one of the rudest of these urns found in Scotland, which was discovered near Duff House, Banff. Fragments of a thin blade of bronze were also found in this urn. In an urn field at Alloa, Clackmannanshire, which yielded twenty-four urns, two penannular armlets of gold with expanding ends were found on the cover stone of a cist containing the remains of an unburnt human skeleton. A gold armlet of the same type was recovered from among the burnt bones in a cinerary urn dug out of a large mound at Upper Dallachy, Banffshire. In one of a group of cists opened at Largiebeg, Arran, was another of these armlets; and yet another was found in an urn in the north of Scotland in 1731.² On the estate of Sunderland, Islay, an ornament with cup-shaped terminals, and another formed of "a broad band of gold beaten out so as to form a convex centre, on either side of which was a fluted ornamental border and a raised rim returned

¹ *Anc. Br. Imp.*, p. 218.

² *Scotland in Pagan Times, the Bronze and Stone Ages*, p. 64.

at the edge," were found in or near one of a number of cists in the vicinity of a large standing stone.

In three cases penannular armlets with expanding ends are stated to have been discovered in or near cists which, in the vast majority of cases, belong to the time of the beaker or food-vessel. This is suggestive of a very early date for this variety of armlet; but as these records are nearly a century old, and no details regarding the other contents of the cists have been given, too much reliance cannot be placed on them. It is quite clear, however, that this variety of ornament was contemporary with the cinerary urn, and as examples have been found with socketed axes and with other classes of objects found in association with the fully developed sword with the notch on the edge near the hilt, it can be claimed that the use of the cinerary urn extended down to the latter part of the Bronze Age in this country.

Relics belonging to this period not found in the hoards but shown in fig. 8 are a sword with blade and pommel cast in one piece (No. 4) from Leadburn, Peeblesshire; a spear-head with lunate openings in the blade (No. 8) from Denhead, Coupar-Angus; a ferrule (No. 9) from the Clerk of Penicuik collection; an anvil (No. 14) from Kyle of Oykel, Sutherland; a socketed chisel (No. 16) from the Sim of Culter collection; a sickle (No. 19) from Dores; a razor of peculiar form (No. 23) from Kinleith, Midlothian; and a calcined flint arrow-head (No. 28) found in a cinerary urn at Kingskettle, Fife.

Fragments of clay moulds for casting socketed axes, spear-heads with lunate openings, swords, and other indeterminate objects of this period have been found on Traprain Law, East Lothian,¹ and two moulds of stone for casting socketed axes have been found at Roskeen, Ross-shire;² but so far there is no evidence of the *cire perdue* process having been in use. No similar clay moulds seem to have yet been found in England, but one or two fragments of sword moulds of clay have been discovered in Ireland. Doubtless the fragile and perishable nature of these objects accounts for their scarcity.

Occasionally small ornaments of bone and other materials have been found in Scottish Bronze Age graves. A bone pin or bodkin, another pin-like object and part of an ornament (fig. 15, No. 2) of the same material, and a bronze knife were recovered from a short cist which contained human remains at Letham Quarry, Perth.³ In fig. 15 are shown others found with urns. The bone ring with two small

¹ *Proceedings*, vol. lvi. p. 213, fig. 14.

² *Prehist. Annals of Scotland*, vol. i. p. 345, figs. 48 and 49.

³ The bone objects are not mentioned in the report of the discovery in *Proceedings*, vol. xxxi. p. 181.

loops on the exterior (No. 1) came from a short cist which contained a beaker, at Broomend, Inverurie, Aberdeenshire,¹ and a ring of much the same form from a short cist containing a beaker, flint arrow-heads, and human remains, at Clinterty, Kinellar, Aberdeenshire.² All the other objects were found with cinerary urns. The slate pendant (No. 3) was discovered in a cordoned urn, at Seggiecrook, Kennethmont,

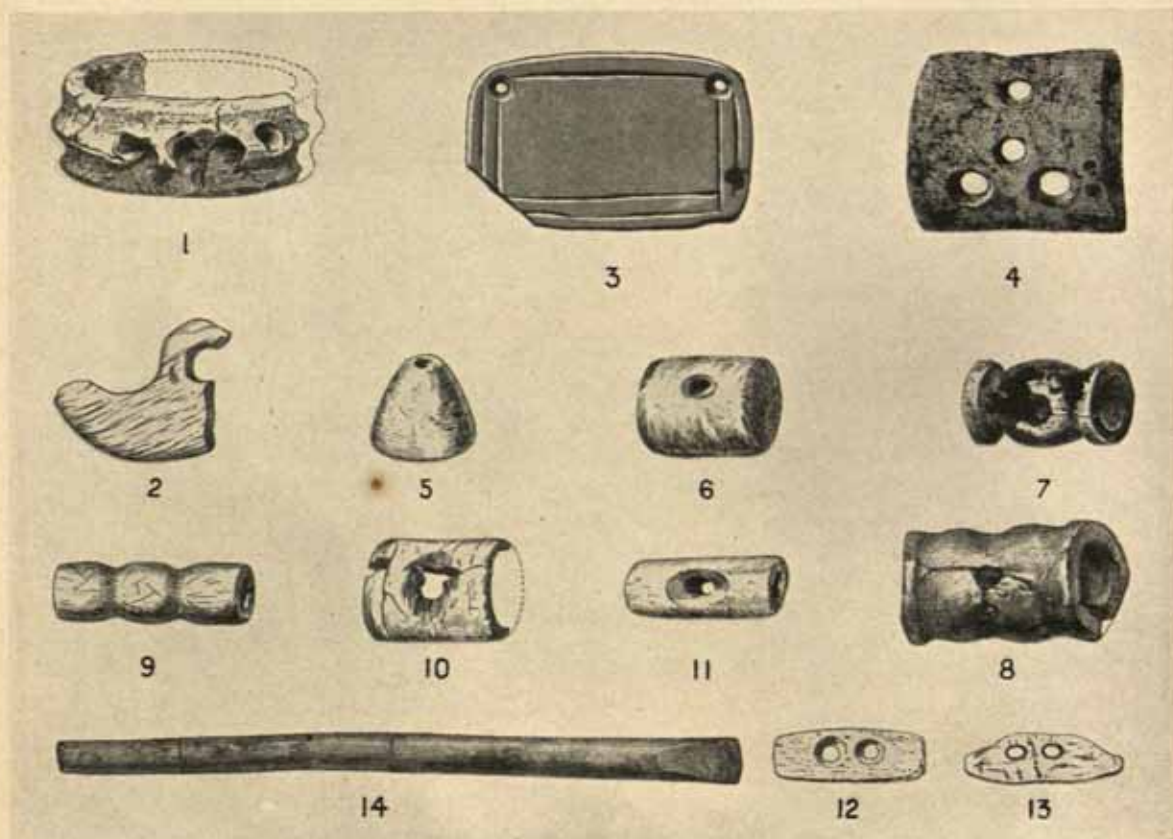


Fig. 15. Small objects of Bone, Stone, and Clay found with Cinerary Urns. (†.)

Aberdeenshire, and the bone bead (No. 7) and the conical and cylindrical partially perforated pendants of clay (Nos. 5 and 6) in a similar vessel in the same gravel pit,³ there being other five pendants of the latter type. A bead (No. 8) resembling No. 7 was found in a cinerary urn at Dalmore, Alness, Ross-shire.⁴ No. 10, like the last two, is perforated at

¹ *Proceedings*, vol. vii. p. 112.

³ *Ibid.*, p. 184, and vol. xlii. p. 212.

² *Ibid.*, vol. xxxix. p. 434.

⁴ *Ibid.*, vol. xlii. p. 257.

right angles, and was found with five calcined flint arrow-heads and three bone beads—of which two (Nos. 9 and 11) are illustrated—in an urn with a heavy overhanging rim in a cairn in the parish of Old Kilpatrick, Dumbartonshire.¹ The bone pin-like object with the chisel-shaped end (No. 14) was recovered from an urn which contained burnt human bones and a flint arrow-head, at Foulford, Banffshire,² and the three perforated objects (Nos. 4, 12, and 13) from urns discovered at Gourlaw, Midlothian;³ Balnabraid, Campbeltown, Argyll;⁴ and Woodhead of Garvocks, Dunning, Perthshire.⁵

The hoards of this, the fourth, period, come from all parts of the country, from the extreme north to the extreme south, one of them having even been discovered within a short distance of such a remote corner as the Butt of Lewis. But of the forty-nine, only seventeen come from the counties south of the Forth and Clyde canal; eight of the twenty-three containing socketed axes, nine of the twenty-two containing swords, and only two of the fourteen containing spear-heads with pin holes in the socket, come from this part of the country. The fact that the majority of them come from the north, which was most remote from external influences and trade, is significant, and we may claim with a considerable degree of confidence that the manufacture of the various classes of implements and weapons was carried on in the north as well as in the south, although the discovery of moulds for swords and spear-heads has, so far, been confined to the latter part. Indeed, if we limit our inquiries to the hoards containing penannular armlets of bronze with solid expanding ends, it is seen that the whole five which produced these ornaments come from the north and north-east. The distribution of the hoards containing similar armlets of gold, when considered irrespective of the numbers of specimens contained, is also interesting, because it is sometimes suggested that these objects were imported from Ireland. Five come from the north and north-east of the country, four from the same quarter but near the divisional line mentioned; omitting the abnormal examples from Carmichael, four from the southern counties, and eight from the western seaboard, going as far north as the neighbourhood of Fort William. If the provenance of discoveries may be taken as evidence of the source of manufacture, it seems very likely that bronze examples were made in the north; and if this be so, there is no reason why those of gold should not have been made as well, seeing that the metal is found in the burns of both the north and the south.

The evidence of the twisted torcs of gold points to the same conclusion, seven of the discoveries of these objects being located in the

¹ *Proceedings*, vol. xlii. p. 218.

² *Ibid.*, vol. xxxi. p. 221.

³ *Ibid.*, vol. xxxix. p. 416.

⁴ *Ibid.*, vol. liv. p. 179.

⁵ *Ibid.*, vol. xli. p. 9.

northern counties and only two in the south; five of the seven northern finds being so far away from Ireland as Aberdeenshire, Morayshire, and Ross-shire.

During the Bronze Age the alterations which took place in the form of certain of the more important implements and weapons were brought about solely by the desire to develop and improve them. From the simple flat axe was gradually evolved the socketed axe, and from the dagger came the spear-head and the sword. But the variations which occurred in the ornaments seem rather to have resulted from changes of taste and fashion. During the second period, that of the flat axe, the elaborate necklace of jet or lignite in its various forms was a popular ornament, but there is no evidence to show that it continued to be made and worn into the fourth period. If we restrict ourselves to the evidence supplied by the hoards, the only jet ornaments of the time when the socketed axe was in use were flattened spheroidal beads. There is no appearance of the armlet of jet which was so popular in Scotland during the Early Iron Age, and especially in the first four centuries of the Christian era. Of course, these armlets may have been made before the close of the Bronze Age while cremation of the dead was practised, but as the Scottish examples are usually made of cannel coal or shale, they would have little chance of surviving the flames of the funeral pyre. There was also a complete change of fashion in the bronze armlet. At the time of the flat axe there were several varieties: the simple ring, generally flattened on the inside, with or without a break in it, but with the ends closely pressed together (fig. 2, No. 8), what may be termed a broad cordoned armlet (fig. 2, No. 10), and a still broader ring with *repoussé* ornamentation, cast without a break (fig. 2, No. 9). Although a number of plain rings of various sizes without a break and of circular section have been found with the socketed axe, the typical armlet of this period seems to be of the penannular variety with expanding ends. Also, the torc of twisted wire of the flanged axe time may be the progenitor of the twisted torc formed from a thin strip of metal which was contemporary with the socketed axe.

From our survey of the hoards we may assign the following lists of objects to the four different periods into which we have divided the Bronze Age in Scotland:—

PERIOD I.

Flat copper axes and pottery of unspecified character.

PERIOD II.

Flat bronze axes; flat axes with slight flanges running as far as and dying out at the butt-end and where the front part swells out to form a crescentic cutting edge; halberts; thin, flat, round-pointed knives, with rivet holes in the butt; thin, flat, triangular daggers with sharp points, slight longitudinal ribs, and rivet holes in the butt; hollow, conical bronze bosses; plain bronze armlets, either completely annular or with a break in the ring, the ends of the latter being brought close together, usually flattened on the inside; cordoned flat bronze armlets with a similar break in the ring; completely annular bronze armlets with *repoussé* ornamentation; ear-rings of bronze and gold; gold lunulæ; thin gold mountings for the hafts of knives and daggers; necklaces of thin tubular bronze beads with a wooden core; amber beads; jet buttons with V-shaped perforation; jet necklaces of discoidal and oval beads, and of trapezoidal and triangular plates, frequently with a triangular pendant at the lowest central part; beakers and food-vessels; flint arrow-heads; stone hammers and axe-hammers; stone bracers or wrist-guards; stone moulds for casting flat axes, rings, and bars or ingots; pins and small ornaments of bone; and a horn spoon.

PERIOD III.

Flanged axes with or without stop-ridges, the flanges wide and triangular and much shorter than those of the second period; palstaves with wide triangular flanges and a sunk stop; palstaves with flanges narrower and curving into the stop and with a loop on one side; socketed spear-heads with loops on the socket or at the base of the wings of the blade; daggers; rapier blades; a tanged knife with parallel sides and rounded point; small chisels without a stop on the stem; tanged razors with a notch in the tip of the blade but with no perforation below the notch; a twisted torc of thin bronze wire and one of gold; a coiled armlet of gold; a pin with discoidal head and loop on stem; small oval doubly perforated plate of bronze; beads of glass and amber; flint arrow-heads; stone hammers and axe-hammers, and stone moulds for casting spear-heads with loops and palstaves—possibly also cinerary urns, incense cups, and segmented, quoit-shaped, and star-shaped beads of bluish vitreous paste.

PERIOD IV.

Socketed axes; spear-heads with pin holes in the socket and with lunate openings in the blade—one of the latter of the variety with barbs at base of the blade; swords with notches on the edges, and occasionally with pommel and grip cast with the sword; sword chapes narrowing

towards a blunt point; shields; socketed gouges; socketed curved tools; a socketed hammer; an anvil; tanged chisels with a stop on the stem; socketed and tanged knives; razors with bifid blade and perforation beneath the notch; thin, flat, oval blades ornamented on the faces with or without a tang; hammered bronze cauldrons with heavy rings; hammered and cast bronze bowls; beads of amber, jet, glass, and gold; penannular hollow objects of gold of triangular section; small penannular objects of gold and of bronze, and with bronze cores covered with a thin leaf of gold; torcs of gold and of bronze formed by twisting a thin narrow band of metal; penannular armlets of gold with and without expanding ends; penannular ornaments of gold and of bronze with cup-shaped ends; penannular armlets of bronze with expanding ends; rings of bronze without a break, varying from $\frac{3}{4}$ inch to $3\frac{1}{8}$ inches in external diameter; cinerary urns and incense cups; flint arrow-heads; stone moulds for casting socketed axes, and clay moulds for casting socketed axes, spear-heads with lunate openings in the blade, and swords; necklets of bronze with pendant rings; large semi-tubular rings without any apparent fixing; a small semi-tubular ring with loops on the under concave side; pins of the sunflower type, with a cup-shaped head, and with discoidal heads either placed horizontally, or vertically with a shoulder on the stem, and trumpets.¹

A comparison of the results of these investigations with those of Montelius is unavoidable, as no one has dealt so completely with the chronology of the British Bronze Age as he, and it will be seen that some of the conclusions arrived at by this eminent antiquary must be modified when discussing the Scottish Bronze Age. This is only to be expected, as some very illuminating discoveries have been made in the fifteen years which have elapsed since his treatise was written.

These modifications are specially noticeable with regard to the chronology of the pottery, as he placed beakers and food-vessels in his first period—that of the flat axe of copper, and the earliest cinerary urns in his second period—that of the true flat bronze axe, extending the range of this class of pottery into his fifth and closing period of the Bronze Age in Britain. Whether the beaker and food-vessel were contemporary with copper axes in Scotland is not known, although an undescribed vessel of clay is mentioned as containing the axes from Tonderghie. But there is no doubt that these two classes of urns were in general use during his second period, the time of the true flat bronze

¹ Only two of the large trumpets of bronze which belong to this time have been found in Scotland. One, known as the Caprington Horn, which has the mouthpiece at the end and is complete, was found at Collsfield, in Ayrshire (*Proceedings*, vol. xii. p. 505); and the other, which is represented only by a small piece towards the narrow end and has the mouthpiece at the side, was found at Innermessan, Wigtownshire (*Proceedings*, vol. xxiii. p. 151).

axe. With regard to the cinerary urn no evidence has been forthcoming so far to show that it was known in Scotland during this period. The earliest date suggested by an examination of the hoards for this class of pottery in our own country is possibly the third period, and that part of it when the earlier variety of palstave had been evolved.

When other classes of relics are considered, it will be noted that Montelius placed knives with the edges rendered concave by sharpening, and those of the Collessie type, bronze ear-rings and conical jet buttons with a V-shaped perforation, in his first period. But while there is no evidence from Scotland that any objects of these types were contemporary with the copper axe, there are records showing that examples of every one of them have been found directly associated with the flat bronze axe of the second period, or with objects which are known to have been contemporary with it. There seems no good reason for Montelius assigning the Collessie knife to the first period, and the example from Butterwick, Yorkshire, to the second, as they resemble each other in size, in the shape of the blades, in the number of rivets (three) in the butt, and in the crescentic marking left on the blade by the haft. Again, the thin corrugated fillet of gold which had decorated the haft of the Collessie knife, assigned by him to his first period, is practically a duplicate of that found with the triangular dagger with three slight ribs from Blackwaterfoot, Arran, which had been placed by him in the second period.

When we come to the third period, that of the palstave, Montelius was doubtful of placing socketed spear-heads in it, but he allotted the variety with slight loops at the base of the blade to his fourth period, by which time he considered that the socketed axe, the early sword without notches on the edges of the blade near the hilt, and the narrow chape or scabbard tip had come into use. That the socketed spear-head with the small loops at the base of the wings of the blade was contemporary with an early type of palstave and should be definitely placed in the third period, is demonstrated by the Glentrool hoard. Again he assigned the narrow chape to his fourth period, that of the sword without notches on the blade; but that it existed during the time of the later sword with notches on the edges near the hilt, is proved by the discovery of five Scottish examples with these swords.

SCOTTISH BRONZE AGE GOLD ORNAMENTS.

The following gold ornaments belonging to the Bronze Age have been found in Scotland, a few of which have already been mentioned in discussing the hoards.

PERIOD II.

Narrow corrugated bands of gold which have been fixed to the hafts of bronze knives or daggers found at Collessie, Fife (fig. 2, No. 6A);

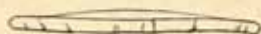
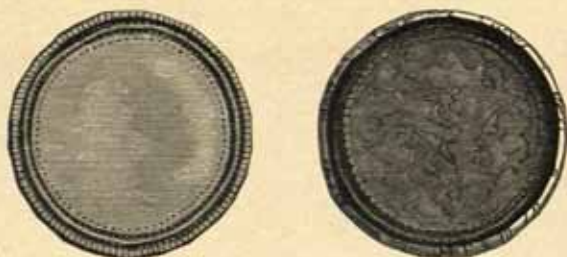


Fig. 16. Gold Mounts from Barnhill. (†.)

Skateraw, East Lothian; Blackwaterfoot, Arran (fig. 2, No. 7A); and Monikie, Forfarshire.

Two thin circular, slightly convex discs found with a bronze knife at Barnhill, Broughty Ferry, Forfarshire (fig. 16).

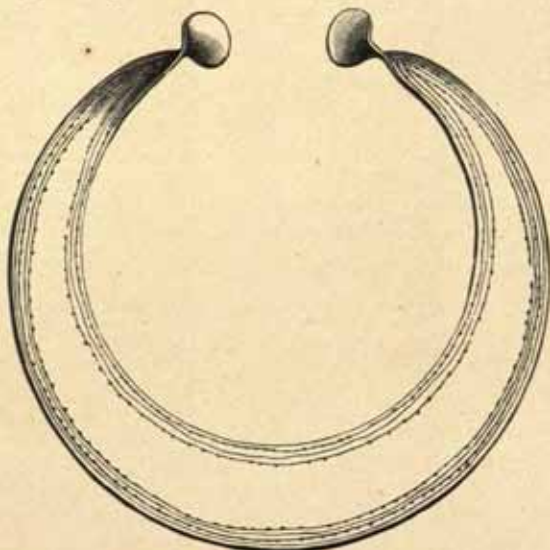


Fig. 17. Gold Lunula from Coulter.

Two ear-rings at Orton, Morayshire (fig. 2, No. 13).

Possibly the four thin circular plates of gold, $2\frac{1}{2}$ inches in diameter, ornamented with concentric lines found with a necklace of amber beads at Huntiscarth, Orkney (*Proceedings*, vol. iii, p. 183).

Two lunulæ from Southside, Coulter, Lanarkshire (fig. 17); one from Auchentaggert, Dumfriesshire; and one found near Forres, Morayshire.

PERIOD III.

An armlet of four coils formed of three twisted wires united at the ends, which are recurved back, from Slateford, Midlothian (fig. 18), and part of a torc made of a twisted wire of square section, from Leys, near Inverness.

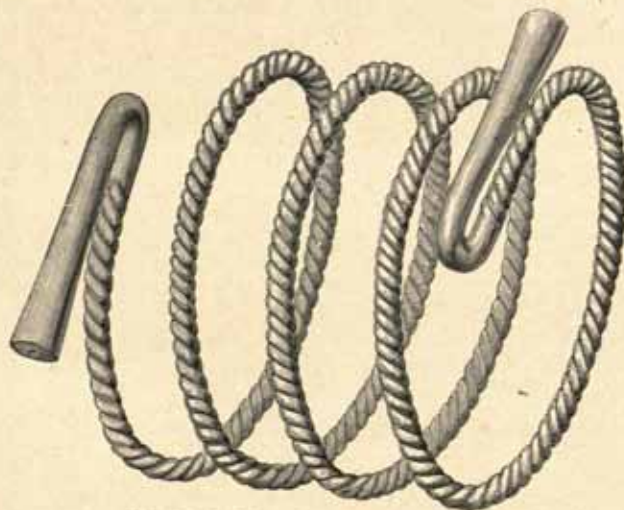


Fig. 18. Gold Armlet from Slateford.

PERIOD IV.

Four pennanular hollow ornaments of triangular section from the hoard containing a socketed axe at Balma-shanner, Forfarshire; one found with a sword and chape at Gogar House, Midlothian; one found with penannular armlets in a moss in the West Highlands (fig. 19); one, corrugated longitudinally, from Glenluce Sands, Wigtownshire; and one found with a gold ring with cup-shaped terminals at Whitefarland, Arran.

Three small penannular ornaments with bronze cores from the Balmashanner hoard; one with a copper core from Skye; another from Galloway; three of solid gold (fig. 20) found with two penannular gold armlets in a cinerary urn near Duff House, Banff; and two with slightly expanded ends at Strond, Harris.

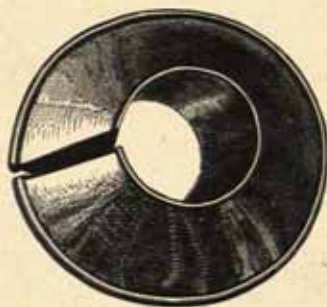


Fig. 19. Gold Ornament from West Highlands. (½.)

Of penannular armlets with expanding ends four were found at Ormidale, Arran; one at Penninghame, Wigtownshire; one at Bonnyside, Stirlingshire; one at Briglands, Fossoway, Kinross-shire; two at Alloa,



Fig. 20. Gold Rings from Duff House, Banff. (†.)

Clackmannanshire (fig. 21); one in the Western Isles; two in a hollowed stone shaped like a rude bowl at Hillhead, Wick, Caithness; and two without expanding ends in a cinerary urn near Duff House, Banff, which also contained the three small penannular objects. All these are preserved in the National

Museum, as also are two found with the penannular ornament of triangular section, already mentioned, in a moss in the West Highlands. Other records of these armlets with expanding ends are—one found with an urn in the Green Cairn, Upper Dallachy, Banffshire;¹ at least thirty-six from Coul, Islay,² which were melted down; one from Galloway;³

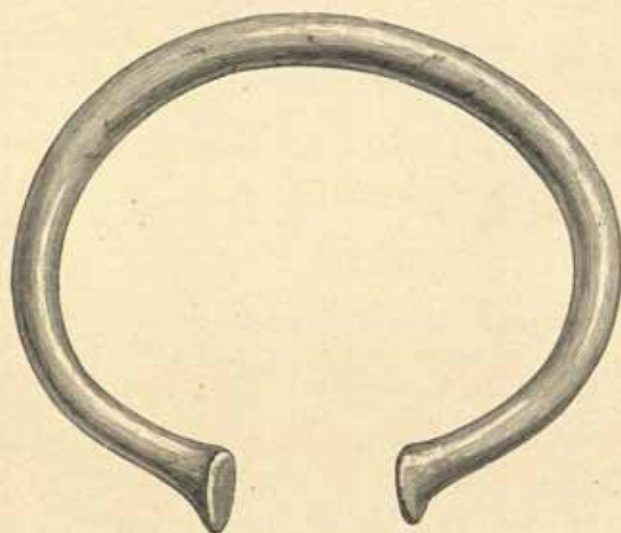


Fig. 21. Gold Armlet from Alloa. (†.)

two found in 1871 in Kilmallie, Inverness-shire,⁴ which may be the two in the possession of Cameron of Lochiel; two from Argyll, preserved in Inveraray Castle;⁵ two from Shieldhill, Muckhart, Perthshire;⁶ one or more from Galla Law, Gullane, East Lothian;⁷ five from Gallow Hill, St Vigeans, Forfarshire;⁸ one from Tangy, Kintyre; one from Boreland,

¹ Chalmers' *Caledonia*, vol. i. p. 129.

²⁻⁸ *Scotland in Pagan Times—Bronze and Stone Ages*, pp. 211-3.

Old Luce, Wigtownshire;¹ one in a cist at Largiebeg, Arran;² one in an urn in the north of Scotland; and three from Stonehill Wood, Carmichael, Lanarkshire,³ of which one was of quadrangular section in the ring and expanding terminals, with two flat gold bands lapped round the ring, and the other two of quadrangular section in the ring but with round expanding ends, one of which had two flat bands of the same metal and a small penannular ring, corrugated lengthwise, wrapped round the ring.

A few penannular ornaments with large cup-shaped terminals have also been found. One in the National Museum came from High Drummore, Kirkmaiden, Wigtownshire⁴ (fig. 22); two from a loch in Galloway;⁵ one from Islay, now in the British Museum; one from Cromdale, Invernessshire,⁶ with the inside of the cups decorated with a row of hatched triangles; one found beside a cist containing a cinerary urn on the estate of Sunderland, Islay,⁷ and one found with the hollow ornament of triangular section at Whitefarland, Arran, which are both in the Kelvingrove Museum, Glasgow.

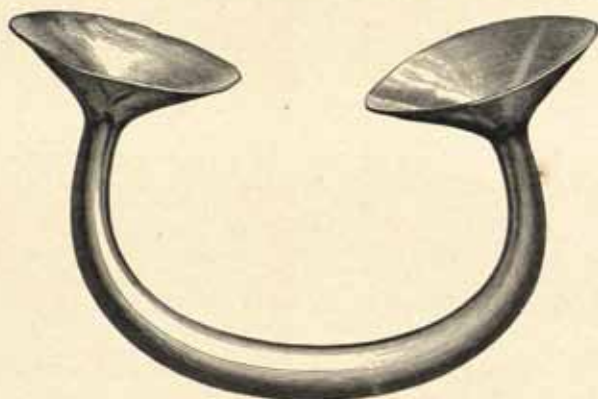


Fig. 22. Gold Ornament from High Drummore.

More than three dozen torcs formed of a twisted flat band of gold with hooked ends were found on the farm of The Law, Urquhart, Morayshire; six of these and a fragment of one of bronze, which is said to have been found with them, being preserved in the National Museum and seven in the British Museum; one was found on the Moor of Rannoch, Perthshire; two at Overshill, parish of Belhelvie, Aberdeenshire; one at Cothill, Belhelvie; two fragments of another in the same parish; one at Little Lochbroom, Ross-shire; and a number at Lower Largo, Fife, of which three (fig. 23) and part of another are in the Museum. One of triangular section, which may be of an earlier period, was found in Stoneykirk, Wigtownshire (*Arch. Coll. of Ayr. and Gall.*, vol. v. p. 38). Several were found with a hollow mounting for the head of a staff or baton, elaborately decorated with late-Celtic designs, and

¹ *Arch. Coll. of Ayr. and Galloway*, vol. v. p. 38.

² *Prehist. Ann. of Scotland*, vol. i. p. 458.

³ *Proc. Soc. Antiq. Lond.*, 2nd series, vol. ii. p. 401.

⁴ *Proceedings*, vol. xxix. p. 8.

^{5,7} *Prehist. Ann. of Scotland*, vol. i. pp. 460-2.

two pellets with a cruciform punch mark on each, all of gold, at Shaw Hill, Cairnsmuir, Peeblesshire; the staff head and gold pellets being in the Museum. The last find is of more than ordinary importance, as it shows how typical Bronze Age objects continued in use well into the Early Iron Age.

Like the arrow-head of flint, other small tools of this material, as also



Fig. 23. Gold Torc from Lower Largo.

stone axes, doubtless continued to be used in Scotland until the latter part of the Bronze Age. Reference has already been made to the discovery of arrow-heads with pottery of the period, but scrapers and knives have also been found with each of the three commonest classes of urns—beakers, food-vessels, and cinerary urns; iron pyrites and flint for striking fire have been discovered with the last-mentioned variety. As for stone axes, three examples of these and a socketed bronze axe, said to have been found together in the parish of Southend, Kintyre, are preserved in the Museum.

IV.

AN OLD CHAPMEN'S STANDARD YARD-MEASURE FROM CERES,
FIFE. BY JAMES L. ANDERSON, F.S.A.Scot.

In the summer of 1914, when on a visit to the late George Millar-Bowman of Logie (of old known as Logie-Murdoch), an estate giving name to that parish in the north of Fife, he presented to me what he described as the Standard Yard-measure of the Chapmen of Fife for the parish or district of Ceres, and I now present it to the Society of Antiquaries of Scotland. It is not of itself a measure. It was the standard or gauge by which the ellwands (so called whether containing 36 or 37 inches) were tested and regulated. Of iron and strongly wrought, it weighs 3 lb. 2½ oz., and has a hinge in the centre so that it can



Fig. 1. Chapmen's Standard Yard-measure.

be folded over into half its real length. Between the flanges at each end its total length is exactly 36 inches. These flanges dovetail into each other. There is a small downhanging projection at each end, so that it can be easily lifted for use; and at the back of the hinge there is a lip of iron, preventing back pressure and so keeping it always on the straight when open. There are two notches upon one of the outer sides, each indicating 4½ inches, which is ¼th of a yard. The photograph of the article (fig. 1) shows it partially opened.

Mr Bowman informed me that it was purchased by his mother (who was born in Ceres, where her father was a clergyman) round about 1860, from David Henry, a general merchant in the town, who was the last boxmaster and clerk there of the Chapmen. He died shortly afterwards. I remember him well. At the same time he offered her the Official Box of the Society which by that time had ceased to exist. She regretted she did not acquire it also. Where it is now Mr Bowman did not know. Neither do I.

There are two inscriptions on the inner side of the measure, but both

are faint and somewhat obscure and worn. It was thickly coated with rust when I got it. From what can tentatively be deciphered they appear to be:—

On the left-hand half,	ER	) ) EP
On the right-hand half, RO	ND	ON CLERK 1705

The words appear to have been incised somewhat lightly by a chisel, when perhaps the metal was cold, and are now difficult to read, save the word and figures Clerk 1705, which are more plain, except that the date may be 1703. ER may represent a part of the name of Ceres, and a Robert Anderson may have been the clerk at that time. But to have thus to prove the genuineness of the article is to call it in question, and, in view of its provenance, it may well be presumed.

The Scots ell consisted of 37 inches, whereas this is of 36 inches, or 1 yard exactly. In the fourth Parliament of James I, held at Perth 11th March 1436, it was ordained that the "elne shall containe thrittie seven inch," as in the corresponding statute of King David. By the Act 2, Charles II, 1663, c. 18, the foot-measure is declared to be of 12 inches, whereof the ell contains 37 inches; and iron or copper measures are ordained to be made and kept by the burghs according to it. The article now presented is a standard issued by the Chapmen of Fife, based upon the official dimensions, and by it the travelling Chapmen, as has been said, regulated the measuring rods they carried as they perambulated, sometimes on horseback, their several districts. False measures were stigmatised by the Societies, and the condemned ellwands, etc., were destroyed.

The Societies of the Chapmen regarded themselves as corporations within their own separate shires or districts, and had their office-bearers chosen annually, of whom one was a clerk, as the records show; and there are many interesting references to them in old song and story. In the time of the persecution in Scotland the Chapmen were credited with having, in their rounds, convened people to conventicles; and on p. 102 of the ninth volume of the *Scottish Antiquary*, 1895, there is printed an account (from a MS. in the Advocates' Library) which states that Captain Buckholm, in command of the King's Guards, in 1678, near to Kinross, took Gilbert Marnock, Lord of the Chapmen in Fife and Kinross (such was the title of their head official), and David Barclay, and carried them to Edinburgh, where they were imprisoned a long time, and afterwards sentenced to banishment to foreign plantations; they were carried to London, but were released there.

However, our subject need not carry us further.

Reference may be made to the Standard Ellwand of Inverkeithing,

of bronze and iron, dated 1500, which was described by Sir James Balfour Paul in the *Proceedings*, vol. xxxi. p. 215, and to the wooden standard yard-measure of the City of Edinburgh bearing the initials of Patrick Lindsay, Dean of Guild, 1726, which is preserved in the Museum (*Proceedings*, vol. iv. p. 442). There is also an old ell-gauge at Dunkeld, of which mention is made in the old *Statistical Account*, vol. xx. p. 433, and to which attention has been directed by Mr Henry Coates, F.S.A.Scot., who has kindly furnished the following details, and to whom I am indebted for the use of the block illustrating it.

This ell-gauge (fig. 2), which is made of solid bronze rods, is built into the front of a house on the west side of the Square, Dunkeld, being the corner building at the entrance of Cathedral Street. This is the oldest part of the town, Cathedral Street containing the only houses which survived the fire in 1689, when Dunkeld was attacked by the Jacobite troops. The building to which the gauge is fixed is known as St George's Hospital, which was rebuilt in 1757. As the gauge bears the date "A.D. 1706," it had probably formed part of the original hospital, and been transferred when the building was reconstructed. The hospital is an ancient endowment. Six or seven old men belonging to Dunkeld still get 14 lb. of meal each fortnight, called the "Beedesman Meal," provided out of the rent of the hospital building.

The gauge is built into the front wall of the hospital in an upright position, and is kept firmly in its place by means of two Y-shaped arms at the top and bottom. It is in a perfect state of preservation. The date is incised in the metal at the top of the shaft. The bottom is 32 inches from the ground, the measurement of the gauge being $37\frac{1}{8}$ inches.

The dimensions of the gauge are:—Total length over all, $52\frac{1}{2}$ inches. Length of shaft, between the springing of the arms, 43 inches. Length of gauge, between the sockets on the left side, 39 inches. Length of



Fig. 2. Bronze Ell-gauge at Dunkeld.

gauge, between the sockets on the right side, $37\frac{1}{2}$ inches. Length of arms, outside, 6 inches. Length of arms, inside, $5\frac{1}{2}$ inches. Width of metal of arms, $\frac{1}{2}$ inch. Width of metal of shaft, above upper socket, $1\frac{1}{2}$ inch. Width of metal of shaft, below lower socket, $1\frac{1}{4}$ inch. Width of metal of main body of shaft, $1\frac{1}{8}$ inch.

The length of a Scottish ell being 37 inches, the space between the sockets on the right side of the gauge ($37\frac{1}{2}$ inches) would allow an ell measuring-stick to go in easily; but possibly the metal may have been reduced by about $\frac{1}{16}$ inch at each end, either by wear and tear, or by the action of the weather.

MONDAY, 12th March 1923.

GEORGE MACDONALD, C.B., F.B.A., D.LITT., LL.D.,
in the Chair.

On taking the Chair, Dr Macdonald announced that Mr Douglas P. MacLagan, W.S., had been appointed Interim Secretary of the Society in place of the late Mr Robert Scott-Moncrieff.

On the recommendation of the Council the following were elected Honorary Fellows:—

M. L'ABBÉ H. BREUIL, D.L.C., Professeur à l'Institut de Paléontologie Humaine, Paris, 110 Rue Demours, Paris.

Professor FRANZ CUMONT, 19 Corso d'Italia, Rome.

G. F. HILL, M.A., F.B.A., LL.D., Keeper of Coins and Medals, British Museum, London, W.C. 1.

Dr BERNHARD SALIN, State Antiquary-in-Chief, Stockholm.

F. G. SIMPSON, 6 Albion Crescent, Scarborough.

Mrs ARTHUR STRONG, Litt.D., LL.D., F.S.A., Life-Fellow of Girton College, Cambridge, and Assistant Director of the British School at Rome, Valle Giulia, Rome.

M. A. M. TALLGREN, Professeur à l'Université, Dorpat, Esthonia.

A Ballot having been taken, the following were elected Fellows:—

MICHAEL CORBET ANDREWS, F.R.G.S., F.R.S.G.S., F.R.S.A.I., Orsett, Derryvolgie Avenue, Belfast.

ARCHIBALD MAXWELL EDINGTON, of the *Montreal Daily Star*, Montreal, Canada.

REGINALD F. FAIRLIE, Architect, 7 Ainslie Place.

ANDREW GIBSON, J.P., M.B., F.R.C.S.(Edin.), St Brinnans, Baillieston, near Glasgow.

HENRY JOHN HOILE, M.A., M.B., Ch.B., 145 High Street, Montrose.

STEWART DOUGLAS JACKSON, 73 West George Street, Glasgow.

JOHN BOYD JAMIESON, M.D., F.R.C.S.E., 43 George Square.

PHILIP NELSON, M.D., Ch.B., F.S.A., Beechwood, Allerton, Liverpool.

Rev. A. F. SCOTT PEARSON, The Manse, West Kilbride.

JOHN RICHARDSON, W.S., 17 India Street.

JOHN KEMP STARLEY, The Manor House, Ryton on Dunsmore, Coventry.

THEODORE RADFORD THOMSON, B.A.(Cantab.), M.R.C.S.(Eng.), 4 Galveston Road, Putney, London.

The following Donations to the Museum were intimated and thanks voted to the donors:—

(1) By the NORTH BRITISH RAILWAY COMPANY.

Food-vessel Urn, 5½ inches in height, found in a short cist near Camelon Railway Station, Stirlingshire, and fragment of an Iron Sword, found in a grave, with human remains, near the above. (See subsequent communication by Mungo Buchanan, Corresponding Member.)

(2) By JAMES MACKENZIE, J.P., F.S.A.Scot.

Packman's Wooden Yard-measure, marked on one side with incised lines at 2½, 4½, 9, and 17 inches from one end.

(3) By JOHN FERGUSON, F.S.A.Scot.

Brass Matrix of the obverse of the seal of the Abbey of Inchaffray, 2½ inches in diameter, showing the side of a Church with central and side towers; in the former is a high-arched doorway, within which is a full-length figure of St John with nimbus, a palm branch or large quill pen in his right hand and a book in his left; around the edge is the legend: S' COMUNE: ECCE. SCI. IOH' IS: EWANGELIST . DE INSULA. MISSARUN.

Seal of Alexander, Duke of Albany, 1458-1485, in red sealing-wax. 1st Arms of Scotland, 2nd Earldom of March, 3rd Isle of Man, 4th Annandale; above the shield a coronet, over which a saltire cooped between two stars, supporters, two bears muzzled, collared, and chained—as No. 2576 of W. Rae Macdonald's *Scottish Armorial Seals*, p. 326.

(4) By W. W. HUNTER, F.S.A.Scot.

Old dentist's Key for extracting teeth.

Two Communion Tokens of the parish of Gordon, 1719.

(5) By JAMES M'PHERSON, F.S.A.Scot.

Pewter Communion Cup with globular bowl, everted lip, baluster-shaped stem, and domical foot; height 9 inches, diameter of bowl $5\frac{3}{16}$ inches, depth of bowl $3\frac{1}{4}$ inches, diameter of foot $4\frac{5}{16}$ inches, bearing on the bowl the inscription BELONGING TO THE/ ASSOCIATE CONGREGATION IN EAST OF FIFE, 1743; believed to have been used in the village of Ceres.

Weaver's Candleholder of iron in the form of an inverted T, with a twisted stem, 11 inches in length, terminating in a hook; the arms also twisted, 1 foot in total length, terminating in sockets; found with the debris of an old handloom in the garret of an old house in Church Street, St Andrews.

(3) By JAMES S. RICHARDSON, F.S.A.Scot.

Powder-horn of ox horn, with a nozzle of the same material, $16\frac{1}{2}$ inches in length along the exterior curve. Engraved on it are the arms of Rutherford—an orle surmounted by three martlets, with crest, a martlet, and motto PROVIDE—and the name JOHN RUTHERFORD, 1757. It also bears representations of Edinburgh Castle, a ship in full sail, a stag, a unicorn, and a peacock.

The following Communications were read:—

I.

A ROMAN INSCRIPTION FOUND AT JEDBURGH, AND SOME ROMAN SCULPTURES RECENTLY PRESENTED TO THE NATIONAL MUSEUM. BY GEORGE MACDONALD, C.B., F.B.A., D.LITT., LL.D., F.S.A.Scot.

1.

INSCRIPTION FROM JEDBURGH.

The operations of a preservative character which have been so admirably carried out at Jedburgh Abbey under the supervision of the Ancient Monuments Department of H.M. Office of Works, have had the incidental result of bringing to light a very interesting relic of the Roman occupation of southern Scotland. On 24th July last, while clearing a corner of the building of an accumulation of débris, the workmen came upon a flat stone, the surface of which was covered with partially effaced lettering. Mr C. R. Peers, who happened to arrive next day on a tour of inspection, at once recognised it as a Roman inscription, and subsequently wrote me suggesting that it would repay a more careful examination than he had had time to give it. Acting on this suggestion, Mr A. O. Curle and I visited Jedburgh together a week or so later, when Mr Menzies and the other representatives of the Office of Works took all manner of pains to help us, moving the stone freely to enable us to scrutinise it in various lights and to secure photographs under the best possible conditions.

The block proved to be 19 inches long by 17 inches broad and 6 inches deep. The letters, which are not very artistically cut, are, as a rule, about 2 inches high. The reading which Mr Curle and I brought away with us was virtually identical with that shown in fig. 1, an illustration which I owe to the kindness of Mr R. G. Collingwood, Fellow of Pembroke College, Oxford. It is reproduced from a drawing which Mr Collingwood made in autumn after taking a rubbing. All the way down the right-hand side and again at the bottom the letters are indistinct through abrasion, and such signs of wear may indicate that the stone had been utilised by the builders of the Abbey as part of the pavement. Originally it had been an altar, as is proved by the appearance, in the last line, of the familiar formula, V · S · L · L · M. The name of the divinity (or divinities) to whom the vow was paid would naturally stand first. But there is no room for anything of the kind on the stone as it is to-day.¹ The inscription is, therefore, incomplete. As the top is neatly enough squared off, we

¹ The markings at the top in Mr Collingwood's drawing may be the remains of the lower end of letters.

may reasonably conclude that the altar has been deliberately mutilated by being reduced in length, in order to adapt it for its secondary purpose. Possibly it was at the same time reduced in depth. That, however, is less certain. Some of the perfectly preserved altars in the Society's collection are no deeper.

If the name of the divinity must remain unknown, the identity of his votaries is, fortunately, not open to question. The altar was set up by the First Cohort of Vardulli, an auxiliary regiment which long helped to garrison Britain, and by its then commanding officer, G. Quintus Severus,



Fig. 1.

whom we now hear of for the first time. Their names and titles occupy lines 1 to 4, and are set forth in perfectly straightforward fashion.* The two lines that follow present a more thorny problem. The fact that they begin with the word **DOM(O)** makes it clear that they record the birthplace of Quintus. Normally, one would expect a town-name to come next. Accordingly, when I first saw the stone, I was disposed to read the immediately succeeding letters as **CAMVL**, and to see in them the same abbreviation of the Roman name of Colchester as is found on some coins of Cunobelinus, the Cymbeline of Shakespeare. That, however, left the remainder of line 5, as well as the whole of the partially obliterated line 6, hanging in the air without any very intelligible sense. In my perplexity I turned for help to Mr J. G. C. Anderson of Christ Church, Lecturer in Roman Epigraphy in the University of Oxford, whose acumen speedily supplied a satisfactory solution of the puzzle.

Mr Anderson found precisely the same difficulty in the reading CAMVL as I had done. But, after he had tried various alternatives, it occurred to him that the ligatured letters might not be MV at all, but MI. The outcome, of course, was CAMIL, and with that the clue was in his hands. CAMIL is a quite regular abbreviation of *Camilia*, the name of one of the *tribus rusticae* which were brought into being when the Roman franchise was extended beyond the city. And one of the best-known of the towns assigned to the *tribus Camilia* was RAVENNA. The arrangement of the words seems at first sight a little odd. But there are other provincial inscriptions which exhibit precisely the same peculiarity—*domo* followed by the name of the tribe and then by the name of the town.¹ Mr Anderson's suggestion thus makes excellent sense. It also agrees perfectly with the markings on the stone. Mr Collingwood's drawing, it is true, shows no trace whatever of a V. On the other hand, in certain lights there is discernible on the stone itself, immediately to the left of the E, something which I find noted in my own first copy as l. Though the indication has apparently been too faint to produce any impression in a rubbing, even under Mr Collingwood's expert hands, it has not been faint enough to escape the camera. It can be made out quite distinctly in fig. 2. But it is not really an l. Comparison with the letter almost immediately below reveals it as the remnant of a V, the right limb of which has been rendered by a vertical stroke.

We are now in a position to expand and translate what is left of the inscription:—" [.] *coh(ors) p(rima) fid(a) Vardul(lorum) c(ivium) R(omanorum) miliaria eq(uitata) et G(aius) Quintius Severus trib(unus) coh(ortis) eiusdem dom(o) Camil(ia) Ravenna v(otum) s(olverunt) l(ati) l(ibentes) m(erito).*" That is to say, "[To] the First Loyal Cohort of Vardulli, Roman citizens, a thousand strong, including a complement of cavalry, and Gaius Quintius Severus, their tribune, a native of Ravenna, a town of the Camilian tribe, paid their vow gladly, willingly, and rightly."

The regiment that figures here is known from a military diploma to have been in Britain at least as early as A.D. 98. How much earlier we cannot say. At one time it lay at Castlecary on the Scottish Wall.² At another—probably before the Antonine advance into Scotland—it was

¹ CIL. viii. 3028, from Lambæsis, has *Domo Collina Cibessos*, and CIL. iii., Suppl. 7289, at Athens, has *Domo Quirina Scupos*; while from Moesia Inferior (*Ibid.*, 12489) we get the variant *Natus Fabia Anquira* (=Ancyra). These instances do not exhaust Mr Anderson's parallels. Probably in such cases the name of the tribe should be regarded as part of the designation of the town. In support of this view, Mr Anderson cites *C. Iulio C. F. Longino, domo Voltinia Philippis Macedonia, veteranus leg. viii. Aug., deductus ab divo Augusto Vespasiano Quirina Reate etc.* (CIL. ix., 4684; Dessau, *Inscr. Sel.* 2460).

² *Roman Wall in Scotland*, pp. 344 f. I may take this opportunity of saying that Mr R. G. Collingwood reads the name on the altar described there as NEPTVNO, not SILVANO.

quartered at Lanchester.¹ But the fort with which its fortunes were most closely identified was Bremenium or High Rochester in Northumberland, one of the eastern outliers of Hadrian's Wall. The large number of inscriptions which it has left there² shows that this must have been its station for many years. It may have moved to Bremenium when it left Castlecary. It was certainly at Bremenium as late as the reign of Gordian (A.D. 238-43).³ The new Jedburgh inscription suggests that at some period prior to the abandonment of southern Scotland, *circa* A.D. 180, the garrison of Bremenium may have been called upon to furnish a



Fig. 9.

detachment to hold a small post on the road to Trimontium. In this respect the other inscription from Jedburgh Abbey,⁴ discovered a good many years ago, provides a curious analogy. The regiment of Rætian spearmen (*Ræti gæsati*), which it mentions, was at Habitancium or Risingham, midway between Hadrian's Wall and Bremenium, in the reign of Caracalla—probably, therefore, for some time before or after or both. It looks as if a detachment of Rætians⁵ had relieved a detachment of Vardulli, or a detachment of Vardulli a detachment of Rætians, in the small post to which I have referred.

¹ *CIL.* vii. 440.² *Ibid.*, vii. 1030, 1039, 1043, 1045, etc.³ *Ibid.*, vii. 1030.⁴ *Ephem. Epigr.*, iv. 601 (p. 204), and vii. 1092 (p. 333); *Proceedings*, 1911-2, p. 483.⁵ The inscription speaks definitely of a detachment (*vexillatio*).

One cannot help wondering where the post was. Hitherto it has been customary to assume that the Rætian altar was brought from Cappuck. That is, of course, possible. But those who know the locality best are inclined to doubt whether it would have been worth while to carry stones so far, when so much excellent building-material was available close at hand. It may be that both dedications really belong to a fort of which no trace now survives, but which once commanded the crossing of the Teviot.

2.

SCULPTURED STONES FROM CROY.

The two sculptured stones which I propose to notice briefly appear to have been dug out of the ruins of the Roman fort at Croy about the end of the eighteenth or the beginning of the nineteenth century. For more than a hundred years they have been built into the wall of the farmhouse of Nether Croy. The house was recently pulled down, and Carron Company, to whom the property belonged, have kindly presented them to the Society for preservation in the National Museum. They were described to the Society of Antiquaries of London as long ago as 1826 by a Somersetshire clergyman, the Rev. John Skinner, who had seen them when he was visiting Scotland in the preceding autumn, and had made drawings.¹ They are also discussed in my own book on *The Roman Wall in Scotland*,² where attention is directed to certain inaccuracies in Skinner's sketches. The photographs from which the illustrations in *The Roman Wall* were reproduced had, however, to be taken under difficult conditions. Since the stones reached Edinburgh the thick coat of paint with which they were covered has been carefully removed. A much more satisfactory examination has thus become possible, and some interesting details have been revealed.

Fig. 3 is a small stone about 14½ inches high and 13½ inches broad.³ Originally it must have been somewhat larger. The rough edge along the bottom is suggestive of mutilation, and the tenant of 1826 told Skinner that, when he first saw the sculpture, there was an inscription beneath, but that the masons had hewn this away in order to fit the block into its place in the wall of the farmhouse. The portion that remains shows three soldiers standing to front, side by side. Each of the two towards the left has a *pilum* in his right hand, and supports upon the ground, with his left, an oblong, semi-cylindrical shield—the

¹ *Archæologia*, xxi. (1827) pp. 455 ff.

² Pp. 350 f.

³ The slight difference between these dimensions and those given in *The Roman Wall* (p. 300) is due to the measurements having been in the latter case taken while the stone was still in the wall and its outline not clearly distinguishable.

scutum of the Roman legionary. In the centre of the shield is something that may be merely a boss (*umbo*), but may possibly be a Gorgon's head upon a raised rectangular background. Over the top hangs the soldier's helmet, suspended apparently by the chin-strap. The figure on the right also has a *scutum*, but he carries it on his left arm, as when in action, and instead of a *pilum* he holds a drawn sword in his right hand. His helmet is visible in front of his body, either hung round his neck or (more probably) grasped in the fingers of his left hand. All three wear



Fig. 3.

the ordinary legionary tunic. The sculptor has shrunk from any attempt to indicate the cuirass realistically, and his representation of what is presumably the *sagum* or military cloak is curiously conventionalised. Skinner propounded the theory that we have here a portrait of the Emperor Septimius Severus and his sons Caracalla and Geta. That, however, is quite out of the question. Apart from other objections, it is obvious that Imperial personages would never have been represented with the uniform and equipment of the rank and file. The figures may well be intended for portraits, perhaps of a father and two sons who had fallen in battle. But, in the absence of the inscription, we can only

designate them as legionary soldiers, and conjecture that the slab may be the upper portion of a tombstone.

Fig. 4 is much more of a fragment than fig. 3. It is the left-hand portion of a decorated slab that has originally borne an inscription. A figure of Venus quitting the bath, glancing furtively behind her as she steps to the left, is seen between two Corinthian pillars, from the inner of which an arch has sprung. The centre of the stone has been occupied by a large wreath, within which the inscription was cut, while a naked



Fig. 4.

figure is huddled into the corner between the wreath and the base of the pillar beside it. Until the paint was removed, no trace of the inscription could be detected with confidence. Now, however, one can make out quite distinctly V and possibly VI, which would correspond with Skinner's drawing.¹ He saw in this the remnant of a dedication to Victory. Others have thought that the stone had belonged to the series of distance-slabs. A more likely explanation than either is that it has been an ordinary building-inscription consisting of three or four lines. A very similar, but somewhat simpler, stone is built into the wall of Cadder

¹ It would also correspond with the drawing made in the same year by Dr John Buchanan (Stuart, *Caled. Rom.*, 2nd ed., p. 341, footnote).

House.¹ It is quite complete, and shows, within a large wreath, the letters:—

LEG

II

AVG

FEC

A stone from Croy Hill, that has long been in the National Museum,² proves that the Sixth Legion did building-work at the fort there. I should therefore propose to reconstruct the inscription of fig. 4 somewhat as follows:—

LEG

VI · VICTR ·

P · F · FEC

II.

ACCOUNT OF THE EXCAVATIONS ON TRAPRAIN LAW DURING THE SUMMER OF 1922. BY JAMES E. CREE, F.S.A.Scot.

This year the excavations on the Law were resumed on 22nd May. The ground selected formed an L-shaped area and lay to the north and east of that opened last year. It amounted to two complete sections, each of 50 feet square, and a fractional area adjoining on the north section O which was previously explored. The two complete sections mentioned have, in conformity with our previous method of identification, been named P and Q, while the fragmentary area which lay immediately north of section O has been called O^a.

Minor excavations on other portions of the hill were carried out during the summer, but these will be described later.

It will be remembered that last year, after determining that the ground examined had been under continuous occupation, at least during the period from the end of the first to the beginning of the fifth centuries A.D., we reverted to the original method of removing the ground in four more or less arbitrary levels of occupation. This method has been continued during the present year, and it must be borne in mind when examining the plans that they do not represent accurately the actual conditions existing at any particular period. As was explained, however, in our last report, the method of removing the soil in four levels has a certain stratigraphical value, as it assists us in approximately dating the relics recovered.

¹ *The Roman Wall in Scotland*, p. 312, No. 19.

² *Ibid.*, p. 314, No. 22.

We shall now describe the excavated area, commencing with the first level section P. After removing the turf and, as usual, about 14 inches of soil, two large circular enclosures formed of rough stones were found to occupy the central position of the section, in a line north and south of one another (fig. 1). That to the north is smaller but more clearly defined. In the larger of the two a small piece of paving occupies a position not far from the south section line; while a few feet towards the west and adjoining the rough stones forming the enclosure, paving-stones may also be noticed. About 10 feet to the north-east lay a ruinous hearth, with three flat stones adjoining it on the north. This seems to have been orientated nearly east and west, the open end being probably towards the west. A few large stones will be noted forming a portion of the outline of the circle on the south-east. These have reference to the alignment of stones placed on the north-west of the roadway, which was described and shown on section N in last year's report. From the smaller enclosure on the north, two narrow passages appear to have led to the south-west and north-east respectively; the latter being bordered on both sides with large stones. A ruinous hearth breaks the continuity of the northern arc of this circle, and a few small paving-stones adjoin it on the north. Another fragmentary hearth orientated north-west and south-east, the open end being towards the north-west, and adjoining which were a few paving-stones, lay close to the western line of the section. In one half of another circular enclosure lying to the east lay the ruins of two or more hearths. The remaining segment of the circle appears on the west side, and also adjoining the roadway in section N excavated last year.

Advancing now into section Q, another fairly well-defined enclosure, again formed of rough stones, will be noticed, lying towards the eastern side of the section. What appeared to have been two ruinous hearths were found slightly to the north-west of the centre; the more northerly being formed entirely of water-worn stones. Neither had any kerbstones remaining. To the north-east were indications of a passage-way, having on its north side a roughly circular area of paving, and another ruinous hearth with only three kerbstones left in position. In the eastern arc of the enclosure, and adjoining the east section-line, remains of another hearth were laid bare; while on the south-east, and also breaking the outline of the enclosure, were a number of flat paving-stones. Close to the south section line, and within a few feet of the hearth last described in section P, lay a roughly square paved area; while on the extreme west of the section, and within a few feet of the south section-line, lay yet another. Due east of the former, and on the east section-line, half a rotary quern was found.

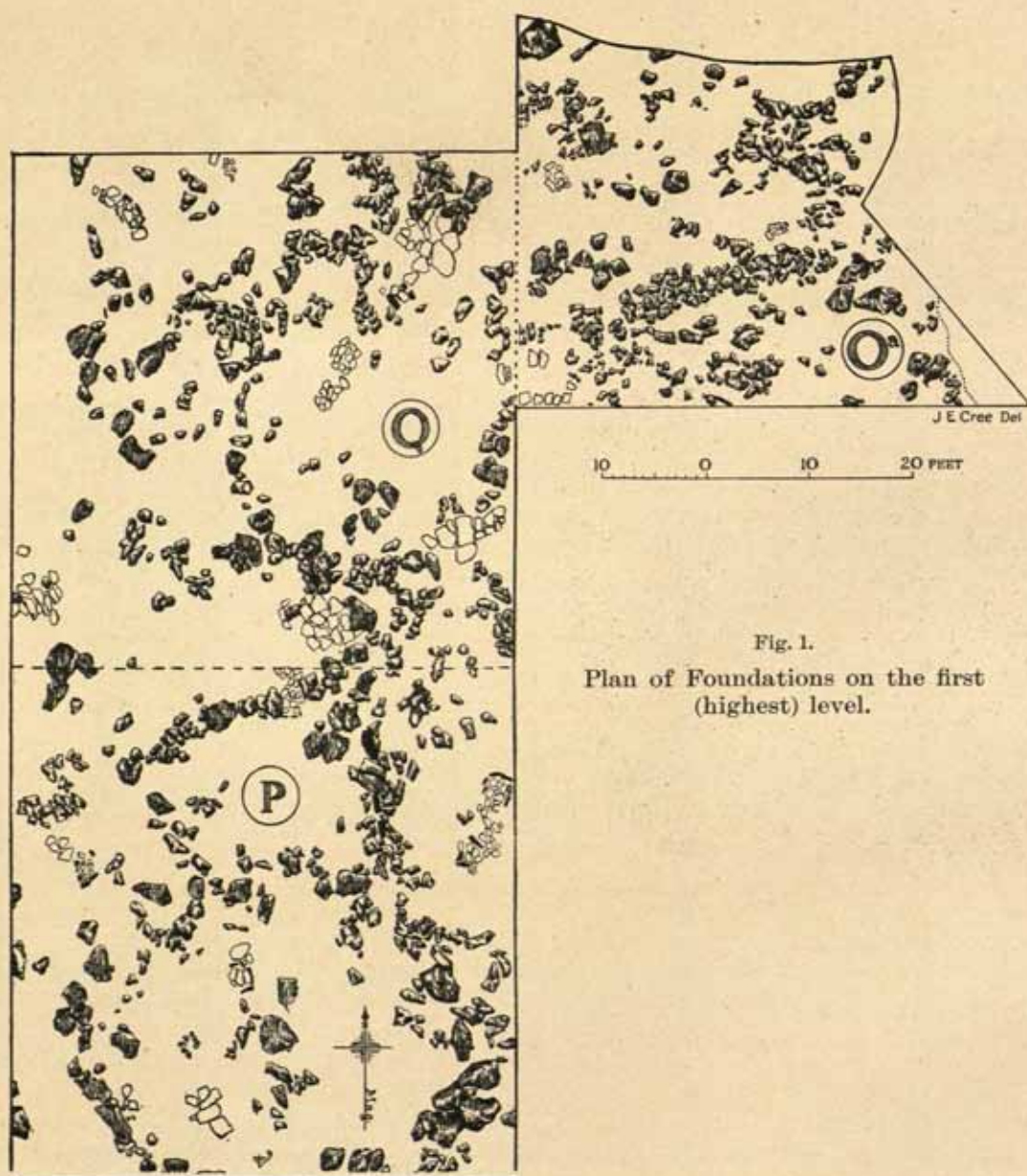


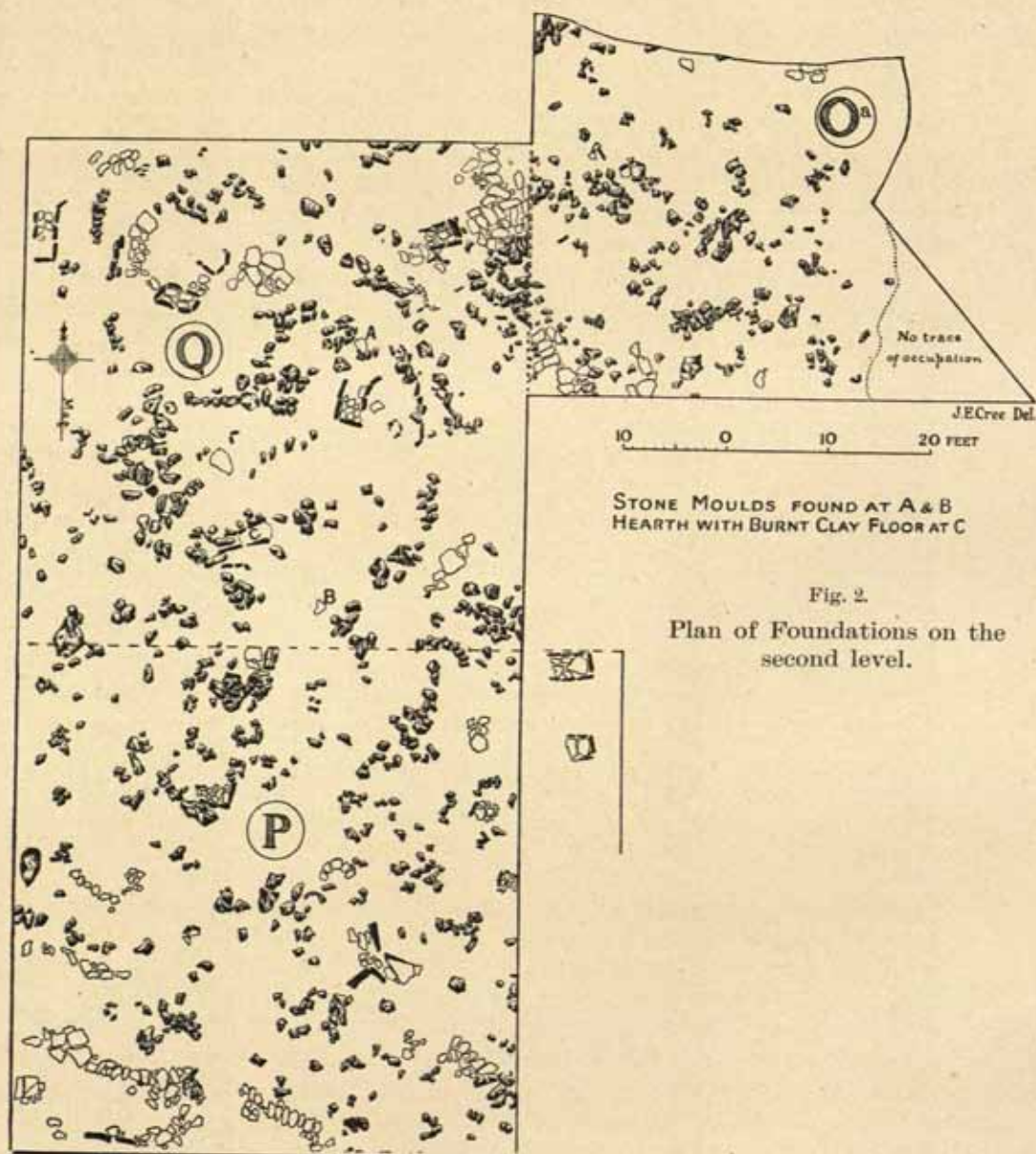
Fig. 1.
Plan of Foundations on the first
(highest) level.

The only other structures worth noting in this section are the remains of a hearth formed of a few small water-worn stones and devoid of kerbing, which lay close to the north line of the section, and a rectangular hearth in the north-west corner orientated north-west and south-east, the open end being in the former direction. A few paving-stones must again be noted adjoining this hearth on the north-west.

Entering now the fragmentary section marked O^a on plan, we found few indications of structure definite enough to be worthy of notice. At the south-west corner were several paving-stones; while a more or less indefinite line, formed of rough stones, extended towards the east for a distance of over 25 feet. Slightly to the east of the centre of the area and towards the north-west were small groups of paving-stones which may have been remains of two hearths.

After removing the stones and soil from the first level, we came to the second level, at the usual depth of about 6 inches. Commencing again with section P (fig. 2), a large number of rough stones were disclosed, of no great size, and having no recognisable formation. Among them, however, several hearths and a considerable number of paved areas were identified, and are shown on plan. Close to the south line, and in the centre of the section, an alignment of paving was found, running in a north-westerly and south-easterly direction. Still further towards the north-west, another slightly curvilinear line of paving-stones, following the same direction, may have had some connection with it; but, as will be seen, the line is not continuous. At the east end of the more westerly alignment, a hearth in fragmentary condition and of uncertain orientation was discovered. Towards the north, and not far from the west section-line, two other settings of paving-stones were found. On the east section-line, and not far from the south-east corner, two other smaller paved areas were uncovered, and about 10 feet from these, in a north-westerly direction, a large and peculiarly shaped hearth was exposed in a somewhat ruinous condition. One large triangular slab and two or three smaller flat stones formed the floor of the hearth, which was bordered on each side by one large kerbstone. Probably the open end of this hearth was towards the north-west, in which direction two very large stones were set on edge and placed outwards at different angles, possibly to induce a draught.

A few feet to the north-west of this, a well-defined semicircle composed of five flat stones was discovered, but its purpose was not obvious. Due east of this, a ruinous rectangular hearth may be noted on the east section-line; about 6 feet north-west of it lay the remains of another hearth, but only two kerbstones remained, both being on the north-west side. A few feet still further to the north lay a small paved area; while



immediately underlying this lay a portion of a rectangular hearth, orientated due east and west. To the north, and nearly on the north line of the section, yet another rectangular hearth was uncovered, about 4 inches below the level we are describing. Its orientation was also east and west, the open end being in the latter direction. The two hearths last mentioned have been placed on the plan, although they do not belong, properly speaking, to this level; yet they afford striking evidence of the continuous occupation of the ground in question. Another fragmentary rectangular hearth, whose open end also appears to have been towards the west, will be noticed slightly to the north-west of the centre of the section. A small rectangular hearth was laid bare, in the centre of and adjoining the north line of the section. It was orientated north-east and south-west, the open end being in the former direction. Contiguous to it on the west and south were three paving-stones.

Proceeding now into section Q, many rough stones were found; without, as in the previous section, any very definite structure being obvious. A small alignment of paving-stones was uncovered in the south-east angle. About 20 feet due west of this, a curious structure which may have been a hearth was brought to light. It was composed of three kerbstones on the north-west side and two large ones opposite, and it measured about 5 feet in length. At the north-east end the kerbstones were about 20 inches apart, while at the opposite end the structure contracted to about 1 foot. No paving-stones were here noticed, but within the dotted lines marked C on plan, burnt clay about 4 inches in thickness was revealed. Eight feet to the north-west of this, a roughly square stone set on end as a pillar, which was sunk some inches deeper, extended to approximately 1 foot 10 inches above the level being described. Seventeen feet to the north of this a rectangular hearth was uncovered, whose orientation was north-west and south-east and which was completely enclosed by kerbstones. Adjoining the hearth on the north-east lay four paving-stones; while a larger and roughly circular paved area was found a few feet still further to the north-east. Close to this on the north-west, was a small semi-enclosed space formed of five stones set on edge; possibly these kerbstones may be all that remained of a hearth. From the north-west end of the complete hearth last described, a curvilinear line of pavement extended in a northerly direction for a distance of about 8 feet. To the west a slightly ruinous rectangular hearth was exposed close to the west line of the section. Its orientation was due north and south, the open end being towards the north. On the eastern side, the line of kerbstones terminated at the open end by an additional kerbstone set at an angle outwards. This

particular feature is worthy of special note, as a hearth of similar construction was found slightly to the east of the centre of the section; this also, it will be seen, has the open end in a northerly direction, with the kerbstone extension on the same side as in the example immediately before noted. Other hearths, resembling this peculiar type, have been brought to light previously,¹ but their significance is not apparent, and it must be pointed out that all of these hearths have been found on the second level, and may therefore be given a fourth century attribution. It will be noted, however, that the kerb extension is in every case on the same side, i.e. to the left, as one faces the closed end of the hearth. About 10 feet north-east of the hearth, a small sinuous line of stones set on their edges may be observed on the plan, and a few feet further north a rectangular hearth orientated nearly east and west. A few paving-stones are to be seen adjoining this to the south-west; while to the east and north-east lay a large paved area, which may possibly have had reference to a dwelling. At a point a few feet north of the rectangular hearth, to the east of the centre of the section, a block of sandstone (marked A on plan) was found, having a mould on two opposite faces for the casting of some object; while towards the south line of the section another and similar block of sandstone (marked B on plan) was discovered, having a mould cut on one face only. These will be described later.

Advancing now into O^a, we again found the structure very indefinite. At the south-west corner some paving will be observed, while a few other paving-stones may be noted slightly towards the east. At the south-east corner, a triangular piece of ground was exposed on which no trace of occupation was discovered. About 21 feet from the south line of the section and 10 feet from the east line, a small fragmentary hearth was brought to light; while on the extreme north-east of the excavation, three paving-stones complete the indications of structure worthy of notice on this level.

About 6 inches below the second level we came to what has been designated the third level (fig. 3). In section P, a small strip of ground in which no occupation was noticed extended to about 30 feet in length, but only a matter of a few feet in width, and lay along the eastern line of the section. As usual, this is indicated by a dotted line. This section and level is of very considerable importance, by reason of the finding of the completion of a circular paved area, an arc of which was discovered on the adjoining ground to the south in 1920. The completed circle has an internal diameter of approximately 30 feet. It may be suggested that the paving shown on plan was laid as the foundation

¹ A hearth of this construction was found in 1914 (*Proceedings*, vol. xlix. p. 150, fig. 6), and another in 1915 (*Ibid.*, vol. l. pp. 77 and 79, figs. 10 and 12).

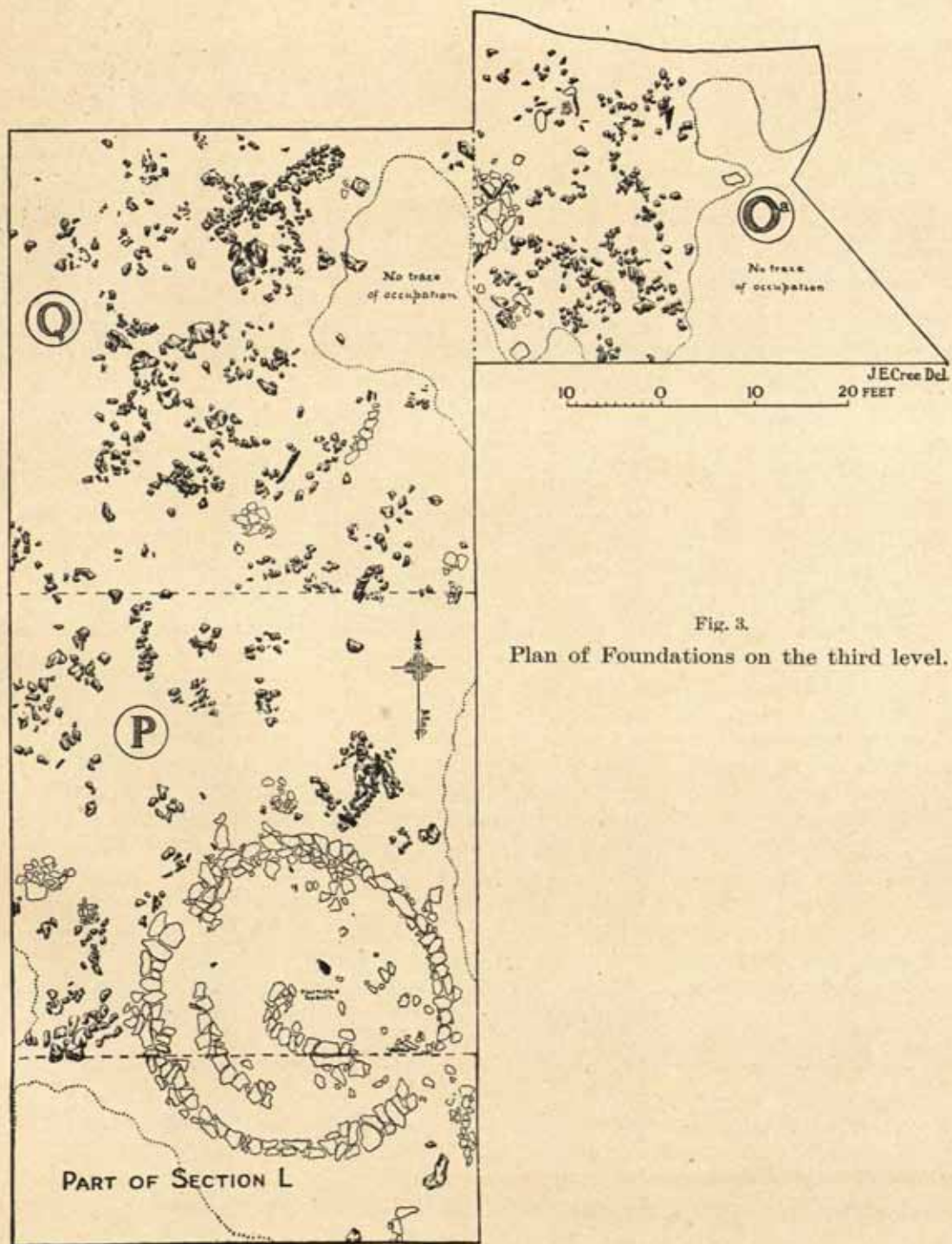


Fig. 3.
Plan of Foundations on the third level.

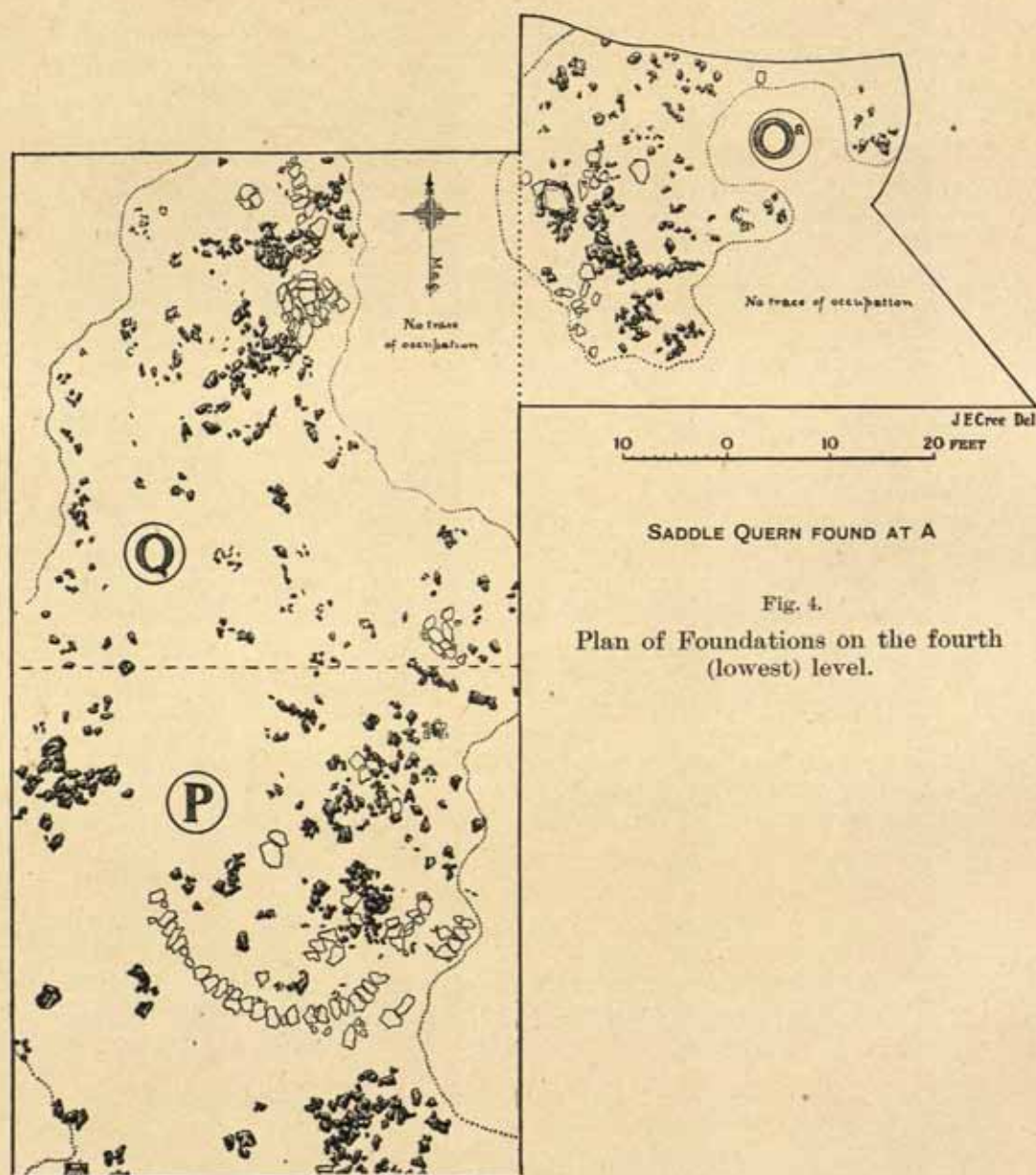
for a turf enclosing wall. The complete enclosure possibly surrounded a single dwelling, as only one hearth, and that in fragmentary condition, was found occupying a central position. An opening about 2 feet in width in the circle of paving to the north-west of the hearth may have been an entrance. Another possible entrance to the south-east will also be seen on the plan of part of section L (excavated in 1920), which has been added to section P in order to show the complete structure. Two inner concentric segments of paving were found, but no flat stones were recognisable which could definitely be attributed to the floor of a dwelling. Presumably, however, a dwelling occupied a prominent position within this circle, and it may be suggested that the enclosure surrounded the residence of some person of importance in the tribe. To the west of the entrance a ruinous hearth was discovered; while a few feet to the north-west lay a paved area. A small incomplete circular hearth was laid bare in the south-western angle of the section, close to an alignment of rough stones which lay in a north-easterly and south-westerly direction. Towards the centre of the section was another fragmentary hearth; while a few feet towards the west one-half of a rotary quern was uncovered. The structure in section Q was of small importance. A ruinous hearth lay at the south-east corner, partly in this section and partly in section P. A few paving-stones lay a couple of feet to the northward. About 8 feet due east, a number of rough stones were laid closely together in line for a distance of about 5 feet. Another structure similarly composed had been placed so as to form two sides of a triangle; while the space between them was filled with clay. Some 10 feet in a north-westerly direction lay a small roughly circular paved area; while almost adjoining it on the south was a small enclosure formed of stones set on edge, which may have been a post-hole. North-east of the floor already mentioned was a line of paving about 6 feet in length. A large irregularly shaped piece of ground, measuring about 30 feet in length and 15 feet in greatest width, occurred on the north-east of the section, in which no trace of occupation was observed. Close to this area, however, a small rectangular hearth was exposed, orientated north-west and south-east, the open end being in the latter direction.

Turning eastwards into section O^a, a considerable portion of the area on the eastern side failed to exhibit any trace of occupation. In the south-west angle, a small ruinous hearth was uncovered, close to which on the north-west, north-east, and south-east lay a few paving-stones. Some 8 or 10 feet to the north of this more paving was brought to light; while the remains of another hearth, probably of rectangular form, lay immediately to the northward, and about 9 feet in a north-easterly direction another ruinous hearth was identified.

The fourth and lowest level (fig. 4) was reached, some 6 or 8 inches below the level just described. In section P, a strip of ground along the eastern side, as indicated by the dotted line, showed no trace of occupation. The principal structure in the section, as may be noted on plan, was a semicircle of flat slabs, which occupied a position slightly to the south of the centre. This in many respects resembled a similar structure shown on the level above. An apparent opening in the enclosure occurred on the south-east side. Two paving-stones, some little distance to the north, may possibly have been a continuation of the circle, as they seemed to lie in the same line of circumference, as did also a saddle quern, marked A on plan. The internal diameter of this structure was about 25 feet. Within the circle was a considerable number of rough stones, some paving-slabs, and a large number of smaller stones set on edge, but their purpose was not apparent. A single kerbstone, having paving on both sides of it, which may be the remains of a hearth, lay in the north-east angle. From the south-west quarter of the section a number of flint and some stone implements were recovered, but no structure referable to the Neolithic or Bronze Ages was recognised.

Proceeding now into section Q, a small paved area was uncovered, close to the south-east corner. Another and larger paving was found slightly to the north-east of the centre; while a few feet distant, in a northerly direction, lay a line of paving-stones about 8 feet in length, and a few more flat slabs forming a small circle were exposed 3 feet to the west of the latter. Numerous rough stones were uncovered, scattered throughout the occupied portion of the section, but these seemed to be devoid of structural form. As was observed in section P, a large number of small stones set on edge were again noticed, and many of these appeared to have been set in more or less square formation, suggesting post-holes. On both east and west sides of the section, considerable portions of the area showed no trace of occupation.

In section O^a adjoining, we found that only about half of the total area had been under occupation. This ground lay mainly towards the west and north of the section. An arc of rough stones was noticed towards the south-west, and a few paving-stones were discovered, both to the north and south of this formation. The only other structure of interest was a small square enclosure about 2 feet 6 inches in internal diameter, lying close to the west section line and within a foot or two of the paving above described. Its purpose was not apparent. The sides were formed of rough stones, which were placed on the natural rubble. The top consisted of one large flag, which was cracked, probably owing to the pressure of soil above. At the north side, the enclosure measured about 1 foot in depth, while at the south side, owing to the natural



upward slope of the hill, the depth was only 8 inches. On lifting the covering slab, the interior of the space was found partially filled with fine silt, and this, on examination, proved to contain only a few fragments of bone, some of which had been burnt. The only relic which came from this enclosure was a small segment of a glass armlet, covered all over its outer surface with enamel. It is of a type now well known at Traprain, and will be described later. Owing probably to its having been found under the large covering slab, it is in better condition than the majority of examples found elsewhere.

As usual, we shall commence with a description of the relics from the lowest level.

RELICS FROM THE LOWEST LEVEL.

While no dwelling-site or structure belonging to the Neolithic or Bronze Ages was found this year, several important relics were brought to light belonging to these periods. We may first describe objects of flint and stone, which possibly may be referable to Neolithic times, and these are shown on fig. 5. No. 4 is a lozenge-shaped arrow-head of grey flint which came from section P. It measures $1\frac{1}{2}$ inch in length, and is nicely worked on both surfaces. Another arrow-head, No. 5, is leaf-shaped, and is somewhat blunted at the point. It is of grey flint, also measures $1\frac{1}{2}$ inch in length, and came from section O^a. From section P came the following scrapers:—One, No. 6, measuring $1\frac{3}{4}$ inch in length and about $1\frac{1}{2}$ inch in breadth, is of brownish flint; another, No. 7, also of brownish flint, made from a flake, and measuring about $1\frac{9}{16}$ inch in length; a small specimen of greyish-brown flint, measuring $1\frac{1}{8}$ inch in length; another, of dark brown flint, is only represented by a semicircular point, measuring $1\frac{1}{8}$ inch in breadth; and yet another, which is calcined, measuring about $\frac{3}{4}$ inch in length. Several other flakes of flint were recovered and one flake of chert, none of which, however, show any working and therefore they are not illustrated.

Relics of stone from this level consist of one fairly large axe of felstone, of which both the cutting edge and the butt have been considerably abraded. It measures about $6\frac{1}{4}$ inches in length, and the cutting edge seems to have been approximately $2\frac{3}{4}$ inches across. No. 1, shows a smaller axe, measuring about $2\frac{7}{16}$ inches in length and $1\frac{1}{4}$ inch across the cutting edge. An implement of greywacke, which is of uncertain use, and may possibly have been a hoe, measures about $5\frac{1}{2}$ inches in length, and is illustrated in No. 2. A deep groove is fashioned on one side about the centre of the stone, and a depression extends across the face to the opposite side. No doubt the purpose of this was for the fixing of the haft. Above the groove on one side the

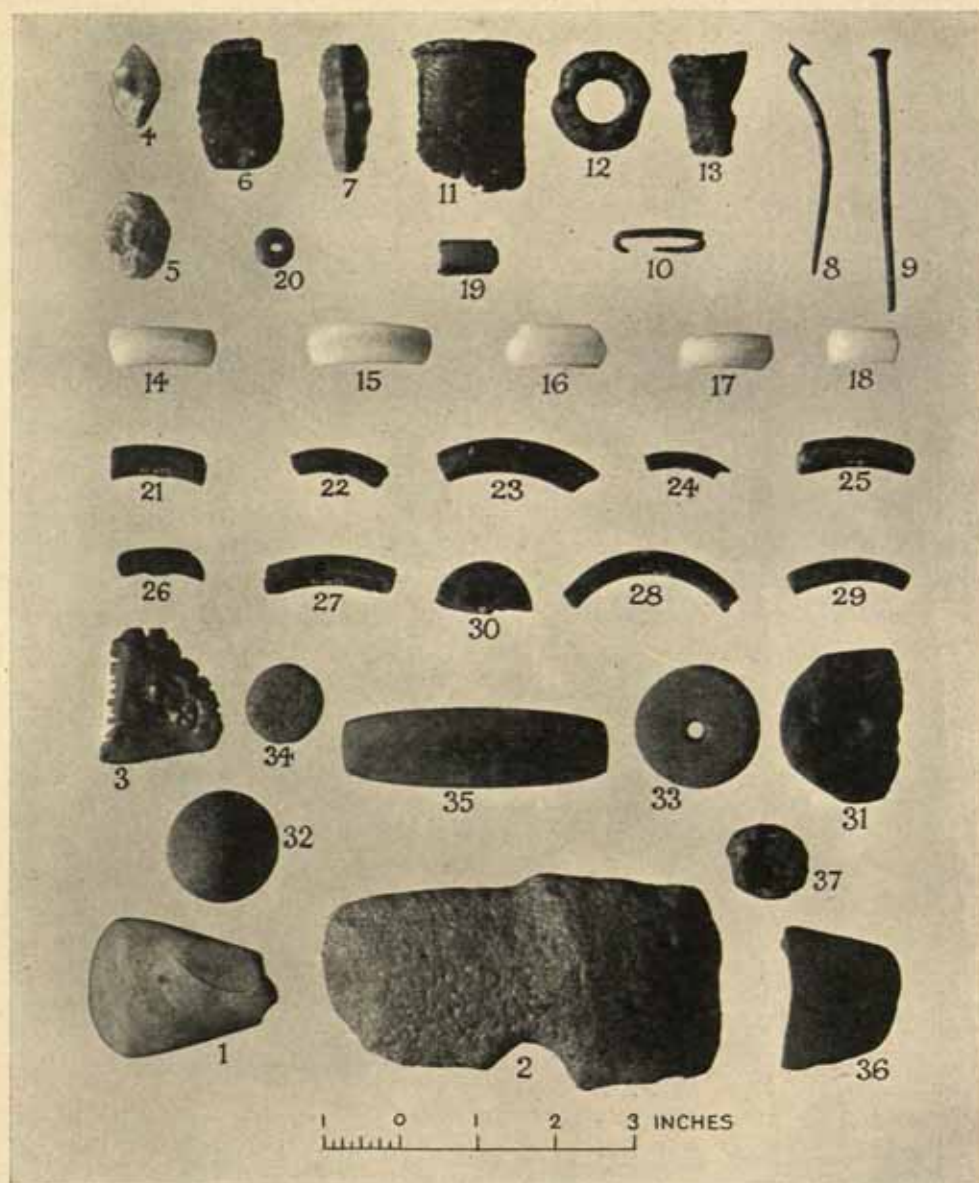


Fig. 5. Group of Relics (other than of Iron) from the fourth (lowest) level. (3.)

stone has been fractured in ancient times, but possibly this side of the butt had been originally similar to the other. The portion of the implement from the groove to the point has pittings all over the surface on both faces, and this probably indicates the method employed in fashioning it.

Relics referable to the Bronze Age are represented this year by a hollow bronze ring, with transverse perforations through it (fig. 5, No. 12, and fig. 6), which came from section Q. It measures $1\frac{5}{16}$ inch in external diameter, and, as far as is known, is the first example of its kind found in Scotland.¹ Two pins (fig. 5, Nos. 8 and 9, and fig. 7), one of which came from section P, and the other from section O^a. The former measures $3\frac{7}{16}$ inches in length, but the point is wanting. The head is circular, and the stem, which is also circular in cross section, tapers gradually towards the point. The second pin, although bent, is complete to the point. It is similar to the one already mentioned, and measures nearly $3\frac{1}{16}$ inches in length. The only other object belonging to the Bronze Age is a portion of one side of the socket of an axe (fig. 5, No. 11). It measures about $1\frac{1}{2}$ inch in length, shows no decoration, and the socket seems to have been ovoid. This came from section Q.

Here may be mentioned an object of felstone which, so far as ascertained, appears to be unique (fig. 5, No. 3, and fig. 8). It is roughly triangular in shape, and came from section Q. From base to apex it measures $1\frac{3}{4}$ inch. The base has been worked from both sides to a cutting edge. On each side saw teeth have been cut; those on one side being nearly double the size of those on the other. The method which has been adopted in forming the teeth seems to have been, in the first instance, to cut a V-shaped slot in the stone and then to round the space between the teeth at the base with a small rounded file. The whole process of fashioning the teeth seems to have been conducted from the same side of the stone. At the apex a tapering slot has been cut, possibly for the affixing of a handle or



Fig. 6. Hollow perforated Bronze Ring. (f.)

¹ Similar hollow rings have been found in Ireland (*Ancient Bronze Implements of Great Britain*, by Sir John Evans, p. 398, fig. 496). The example here illustrated was found at Trillick, Co. Tyrone, and has a pin passing through two such rings. Another is mentioned as coming from Llangwyllog, Anglesea.

haft. Stone saws have been found heretofore, although they are rare, but an implement fashioned in this manner seems to be quite new to Scottish archaeology. Although this comes from the fourth level, and is described immediately following recognisable objects of the Bronze Age, it is by no means certain that it is referable to that period. It may even belong to the Romano-British period; other relics relating

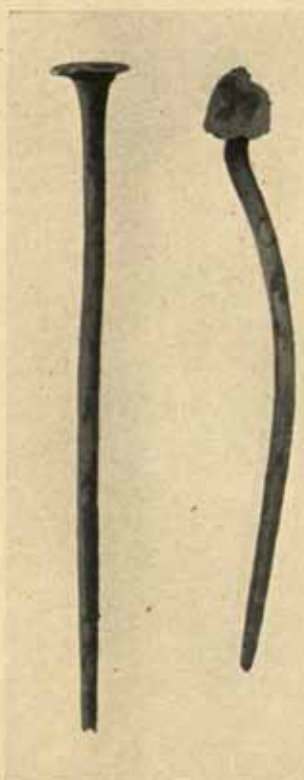


Fig. 7. Bronze Pins. (1.)

to which will now be described, and these, as usual, are attributable to about the beginning of the second century A.D. The sections under review have been curiously unprolific in relics, despite the fact that the ground exposed seemed promising.

Miscellaneous Relics of Bronze.—The following objects of bronze were recovered:—Fig. 5, No. 10, and fig. 9 was possibly an ornament or a clasp for clothing. It came from section Q, and measures about $1\frac{5}{16}$ inch in length. From the centre, which is flat and nicely patinated, it tapers towards both ends. What may have been the upper end has been bent back on the under side of the object for a distance of $\frac{5}{8}$ inch, and forms a squared point. The opposite end has also been bent backwards in a nicely rounded curve. A similar and slightly larger object, but made of iron, was found in 1915.¹ A more ornate example of this class of object from Herpes, France, is illustrated in fig. 196 of the *British Museum Guide to Anglo-Saxon Antiquities*, and is considered typically of Frankish origin. A piece of waste metal from the gate of a mould (fig. 5, No. 13), found in section Q, is similar

to one found last year which came from section M, fourth level.² Two or three other fragments of bronze, which were recovered from all three sections, are too unimportant to merit description.

Objects of Lead.—From section Q came a slightly flattened circular roll nearly $\frac{1}{16}$ inch in length; two small discoidal objects, one measuring 1 inch in diameter and $\frac{9}{16}$ inch in thickness, and the other about $\frac{1}{16}$ inch

¹ *Proceedings*, vol. I. p. 120, fig. 34, No. 10.

² *Ibid.*, vol. lvi. p. 212, fig. 13, No. 4. Another, but conically shaped, piece of waste metal, also from the gate of a mould, is illustrated (*Ibid.*, pp. 234 and 235, fig. 29, No. 10).

in diameter and $\frac{9}{32}$ inch in thickness. Other discoidal objects of varying sizes made of this metal have been found, and it may be suggested that these were weights.

Glass.—Two segments of white opaque glass armlets came from section P, and three smaller ones from section Q (fig. 5, Nos. 14 to 18). They vary from $1\frac{1}{2}$ inch to about $\frac{3}{4}$ inch in length. A small segment of another armlet, complete in itself (fig. 5, No. 19, and fig. 10), only measures $\frac{1\frac{1}{2}}{16}$ inch in length and $\frac{7}{16}$ inch in breadth. It is plano-convex in cross section, and is checked down at both ends, probably to allow it to be joined by means of metal bands to other sections. The surface is entirely covered, except on the under side, by yellow enamel; and on both sides there is a tapering wedge-shaped device formed of reddish enamel; the point of the wedge being reversed on either side. On the mesial line at one end is an oval formed by a cord pattern of blue and white surrounding a yellow centre. This segment came from the small covered enclosure in section O^a, which has been already noted. A fine bead of dark blue glass (fig. 5, No. 20,



Fig. 8. Stone Saw-like Object. (1.)



Fig. 9. Bronze Clasp. (1.)

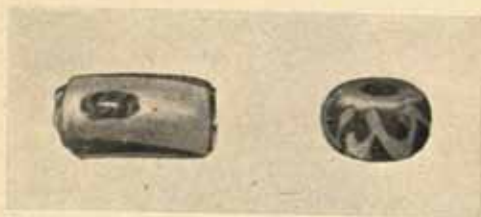


Fig. 10. Segment of Armlet and Bead of Glass. (1.)

and fig. 10), measuring $\frac{1}{2}$ inch in greatest diameter and $\frac{5}{16}$ inch in thickness, is ornamented with a wavy line of white opaque enamel; the hole through it is large and slightly oval.

Jet or Lignite.—There are ten segments of armlets, only one of which is plano-convex, while the others are markedly triangular in cross section (fig. 5, Nos. 21 to 29). Six were recovered from section P, one

small fragment from section Q, and the remaining three from section O^s. They vary in length from about 2 inches to $\frac{7}{8}$ inch. The only other object of jet is half of a large pin head (fig. 5, No. 30), which when complete would have been a flattened spheroid.

Stone.—A saddle quern, shattered at one end, came from section P; a nicely shaped hone (fig. 5, No. 35), formed of a fine-grained stone,

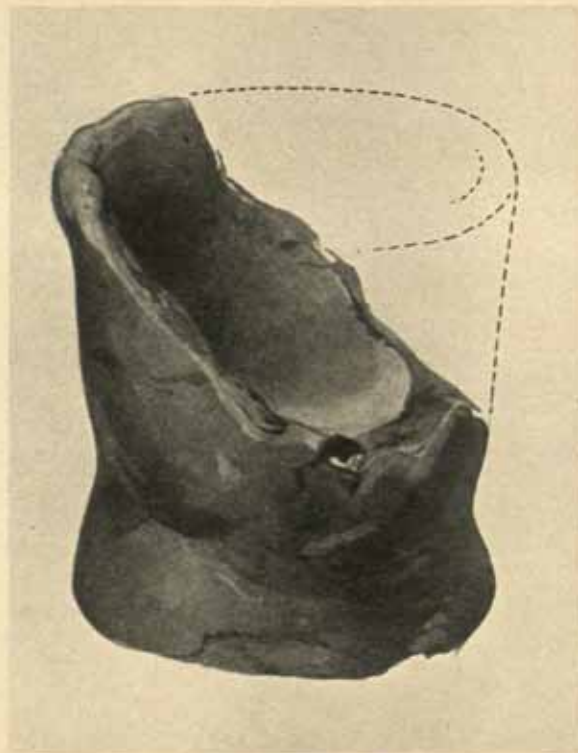


Fig. 11. Vessel of Clay. (†.)

measuring $3\frac{7}{16}$ inches in length and a little over 1 inch in breadth in the centre, from which point it tapers towards both ends, which are squared, and it is evident from marks of striation that it has been much in use; a pounder which shows battering at one end, about $5\frac{5}{8}$ inches in length; a water-worn stone, which has possibly been used as a smoother, and subsequently as a pounder, is much battered at both ends, and measures $4\frac{1}{16}$ inches in length; three other stones which appear to have been used as hones or polishers, measuring respectively $4\frac{3}{4}$, 7, and $7\frac{1}{4}$ inches in length; one flat piece of sandstone, $\frac{3}{4}$ inch in thickness, which shows battering on both faces; a small flat piece of fine-grained sandstone

(fig. 5, No. 36), measuring about $\frac{1}{4}$ inch in thickness, and fractured $1\frac{7}{16}$ inch from the end, which is rounded and sharpened from both faces to a thin edge, and bevelled away in a similar manner, on one side, came from section P; a roughly spherical object (fig. 5, No. 32), which may have been a sling-stone, from the same section; one stone playing-man (fig. 5, No. 34) from section Q; and a piece of limestone which has been burnt, from O^a; also one piece of yellow ochre which has been shaped and faceted.

Whorls.—One complete whorl (fig. 5, No. 33) came from this level. It is of reddish sandstone, measures $1\frac{5}{8}$ inch in diameter, and was found in section O^a; also a roundish piece of shale (fig. 5, No. 31), which is fractured and has probably been intended for a whorl. In what has been the centre of one side is a small cup-marked depression, indicating the commencement of the hole; while on the opposite side a drill has been started in a corresponding position.

Moulds.—The fragment of one-half of a mould made of clay came from section P. It is the portion for the point of a weapon, possibly a spear-head. The matrix is $1\frac{1}{4}$ inch in length, and about $\frac{9}{16}$ inch in width at the broad end. Several other fragments were recovered which may also be portions of matrices for the casting of blades.

Pottery.—A considerable amount of pottery was recovered from these sections. Roman pottery included fragments of Samian ware, cooking-pots, and other wheel-made vessels, including several fragments of a mortarium which came from section Q. A large shard of a fairly coarse vessel came from section O^a. It is possibly a portion of the base and wall of an amphora. Native pottery includes two small vessels. One, the base and part of the wall to the rim on one side, of a small cup-like object which came from section P (fig. 11). The base, which is flat, measures $2\frac{1}{8}$ inches in diameter, while the total height measures $2\frac{3}{16}$ inches. The internal measurement is $1\frac{3}{8}$ inch in diameter and about $1\frac{1}{2}$ inch in height. The other vessel (fig. 12), which is very rudely made, came from section Q. It has a rounded base, and measures $1\frac{11}{16}$ inch in diameter and 1 inch in height. The interior is extremely rough, and seems to have been fashioned merely by pressing the finger into the soft clay in three or four places. The paste of which it is composed contains several stones.¹ A small irregularly shaped object with a deep



Fig. 12. Vessel of Clay. (4.)

¹ Small cup-shaped objects of similar dimensions have been found at Glastonbury (*Glastonbury Lake Village*, by Arthur Bulleid and H. St George Grey, vol. ii. p. 356, pl. lxxxix., Y6 and Y11). Other small earthenware cups are mentioned in *Proceedings*, vol. lv. p. 126, fig. 8, Nos. 4 and 5. They were found in the excavation of Dun Beag, Struan, Skye.

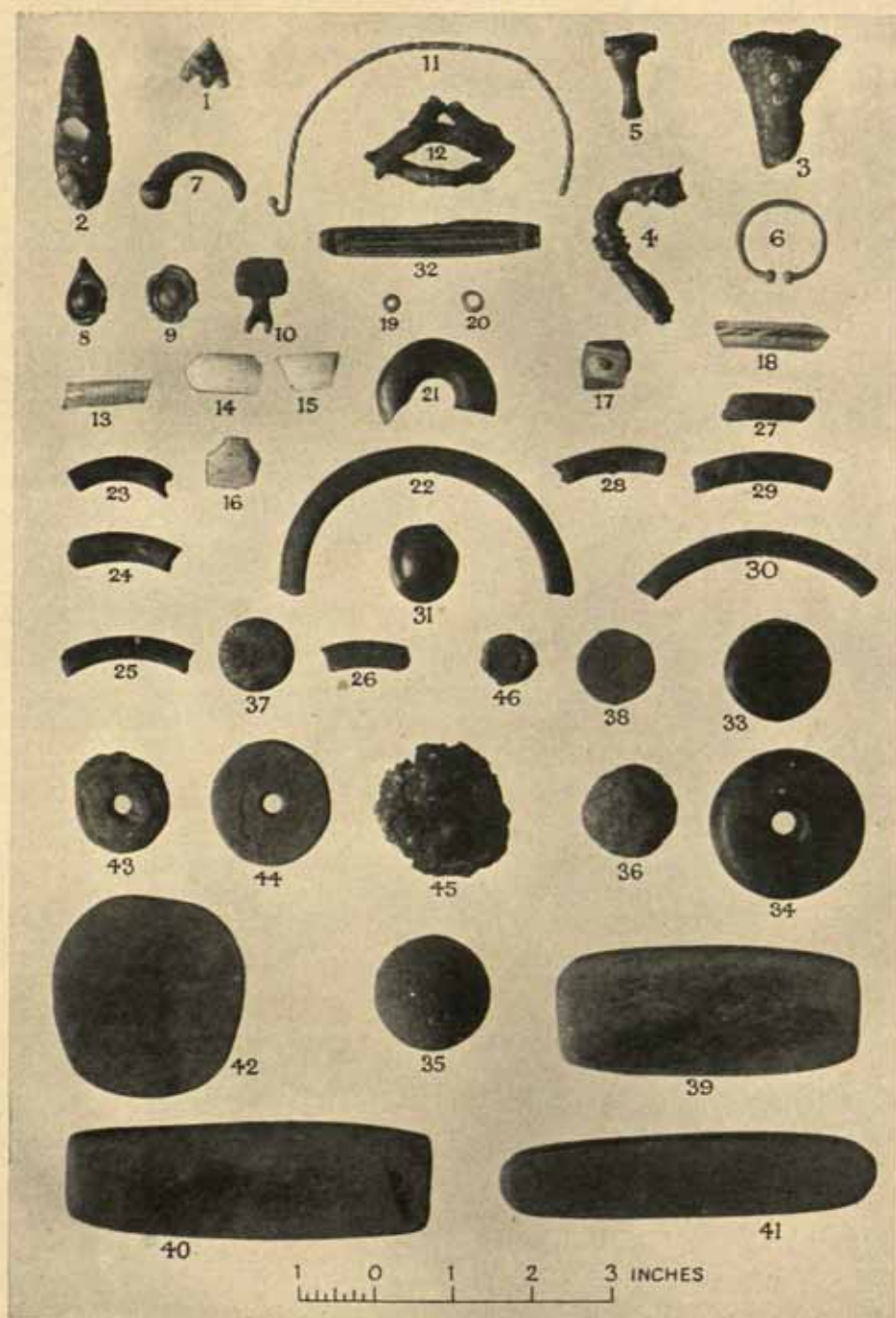


Fig. 13. Group of Relics (other than of Iron) from the third level.

cup-marked depression on one side, measuring $\frac{9}{16}$ inch in diameter, came from section P. A large number of shards of native ware of the usual coarse character were found. They are all undecorated and do not merit description. A fragment of a small crucible came from section Q.

RELICS FROM THE THIRD LEVEL.

We now come to a description of the relics from the third level, which of course, as will be understood, succeeded in an arbitrary sense the preceding and lowest level. They are grouped together on fig. 13.

Objects of Flint.—Several objects referable to the Neolithic Age were also found on this horizon. The flint artifacts are interesting, and include the following:—A fine knife (fig. 13, No. 2) made of a dark brown flint, which measures $2\frac{1}{4}$ inches in length and $\frac{3}{4}$ inch in greatest breadth, came from section P. It is rounded at the base and is nicely worked on both sides to a point. A small barbed arrow-head came from section Q (fig. 13, No. 1). It is of a greyish material, and measures $\frac{5}{8}$ inch from the point to the end of the tang and nearly $\frac{1}{8}$ inch across the barbs. The tang and barbs are all slightly broken. A scraper made from a flake of brown flint, which measures $1\frac{9}{16}$ inch in length and about 1 inch across the broadest part, is from section P. It shows evidence of having been much in use. A small scraper from section O^a is made from a thin flake of brown flint, and measures about $\frac{3}{4}$ inch in length and $\frac{1}{16}$ inch in breadth. It is finely worked along one side from underneath. There is also another small scraper, which has been calcined, and which measures $\frac{3}{4}$ inch in length. From the same section came a saw broken at one end, and also calcined, measuring $1\frac{1}{2}$ inch in length and about $\frac{5}{8}$ inch in breadth. The teeth have been very finely fashioned. Possibly the most interesting object of flint recovered is a "pigmy" (fig. 14), made from a flake of radiolarian chert, and measuring $\frac{7}{16}$ inch in length and about $\frac{5}{16}$ inch in breadth. It is nicely worked round two sides to a point. The mesial ridge is high and slightly crescentic. This is the first pigmy implement found on Traprain Law.¹ Numerous unworked flakes were also recovered.



Fig. 14. Pigmy Implement. (3.)

Having found no relics definitely referable to the Age of Bronze, we now come to a description of those referable to the Romano-British period.

Bronze.—*Fibulae.*—One bow-shaped fibula (fig. 13, No. 4, and fig. 15)

¹ Several pigmies have been found in Berwickshire (*Proceedings*, vol. 1. p. 307, *et seq.*). Another has been found on a Neolithic horizon in a sandy valley to the north-east of Muirfield, East Lothian. Similar pigmies have been recovered from other districts.

with trumpet head, which covers a coiled spring, has the foot, the pin, and most of the catch-plate wanting. The centre of the bow is ornamented by a more or less conventional floriated knob. The fibula is not enamelled, and the workmanship is of rather poor execution. Another fibula (fig. 13, No. 5, and fig. 15) is of the knee-shaped pattern. The pin and catch-plate are again wanting. It is undecorated, and measures only $1\frac{1}{8}$ inch in total length.¹ A finely patinated penannular brooch (fig. 13, No. 6), having fluted terminal knobs, but with pin wanting, measures about $1\frac{1}{8}$ inch in exterior diameter; a fragment of a small penannular brooch also finishes in a fluted terminal knob.



Fig. 15. Bronze Fibulae. (†.)

About one-half of another penannular brooch (fig. 13, No. 7), very massive in character, has measured when complete about $1\frac{3}{8}$ inch in external diameter. The terminal is formed by a rounded knob, below which are two raised mouldings alternating with two grooves; from here, towards the point of fracture, the metal is thinned. All of these brooches came from section Q.

Miscellaneous Relics of Bronze.—Portions of three dress-fasteners (fig. 13, Nos. 8 to 10) were recovered—one from section P and the other two from section Q. That from section P consists of the head only, and is of the boss and petal type. One from section Q has the head formed of a rectangular plate of metal, which is devoid of ornamentation. The loop, which is broken, is more pear-shaped than triangular. The head of the third fastener is circular; the centre is occupied by a slightly raised

¹ Two knee-fibulae were found in 1915 (*Proceedings*, vol. 1. p. 97, fig. 22, Nos. 4 and 5).

boss and the loop is wanting. From section Q also came about one-half of a finely patinated twisted wire armlet (fig. 13, No. 11). It is about $\frac{3}{8}$ inch in thickness, and along the curve it measures about 6 inches. One end remains, which is of the usual hook-like character, terminating in a rounded knob. Had the curve been more open, this fragment might well have been a torc. It has only tentatively been mentioned as an armlet, owing to its apparently restricted diameter. Again, it might reasonably have been referred to the Bronze Age, in which period these ornaments are well known. Still, there is nothing necessarily incompatible with such an ornament belonging to the period under review. Another fragment may have been a portion of an armlet. It is crescentic in form, and measures $1\frac{1}{8}$ inch in length and about $\frac{1}{4}$ inch in thickness. At one end it is checked down, and seems to have been encircled by two mouldings. A piece of waste metal from the gate of a mould (fig. 13, No. 3) is larger, but somewhat similar in form, to one from the fourth level which has been already described. Several of these objects have been found in previous years and have been already noted. A few thin plates, together with three short bars of bronze, all being of indeterminate use, and one piece formed of several rods which have fused (fig. 13, No. 12), sum up the objects under this heading from the sections with which we are dealing.

Lead.—A small and irregularly shaped piece of lead came from section P. Another piece has been fashioned, and may have been intended to act as a pattern for some implement of an axe-like character. The front is smooth, and from the marks of striation may have been dressed with a file; the sides and end are squared but the back is rough, and the object has the appearance of having been spoiled in the making. There was also found a circular piece of lead, much oxidised (fig. 13, No. 45), measuring about $1\frac{1}{8}$ inch in diameter and $\frac{3}{4}$ inch in thickness. It will be remembered that from the level below two smaller discoidal objects, also of lead, were recovered.

Glass.—A few fragments of opaque white glass armlets (fig. 13, Nos. 13 to 16) were brought to light from all three sections, but none merit description. From section Q came one fragment of an armlet (fig. 13, No. 17) richly decorated and completely covered with enamel, except on the under side. A brownish band, upon which is an oval device of a different colour, crosses the fragment obliquely, and this is flanked on both sides by yellow. From the same section came a small segment of a translucent green glass armlet; a trace of white enamel decoration remains on the mesial ridge at one end. A very small fragment of opaque blue glass armlet, triangular in cross section and ornamented with a band of yellow along the mesial ridge, was also found

in the same section. This is the first fragment of this colour recovered from our excavations. A segment of translucent green glass armlet came from section P (fig. 13, No. 18, and fig. 16). It is ornamented along the mesial ridge by an applied cord pattern. This is composed of strands of dark blue and white, the latter alternating in width from a hair line to $\frac{1}{16}$ inch. Also from section P came a small bead of yellow vitreous paste (fig. 13, No. 19), measuring about $\frac{1}{4}$ inch in diameter. Less than half of another bead, also of yellow paste, measures $\frac{7}{16}$ inch in diameter; while one of blue



Fig. 16. Fragment of Glass Armlet. (1.)

(fig. 13, No. 20) is pierced by a large hole, and measures $\frac{9}{32}$ inch in outside diameter. A few fragments of Roman bottle glass recovered are not of sufficient importance to need description.

Jet or Lignite.—Altogether ten segments of armlets of lignite, nine of which are illustrated (fig. 13, Nos. 22 to 30), were recovered from the three sections: four small segments from section P and three from each of sections Q and O^a. Only two segments need here be described. The one amounted to nearly one-half of an armlet (No. 22), slightly tri-



Fig. 17. Jet Bead. (1.)

angular in cross section, and measuring when complete $3\frac{1}{16}$ inches in internal diameter; the other (No. 30), more triangular in cross section, would when complete measure about $3\frac{7}{16}$ inches in internal diameter. There were also found about half a ring of jet (fig. 13, No. 21), measuring $1\frac{9}{16}$ inch in external diameter; a large bead of tubular form made of fine jet (fig. 13, No. 32, and fig. 17), measuring $2\frac{3}{16}$ inches in length, about $\frac{1}{2}$ inch in diameter at the centre, and beautifully ornamented over the entire surface. It is decorated at either end with eight longitudinal grooves, between which the raised mouldings are crossed diagonally by short incised lines placed on each ridge in opposite directions. Still

further towards the ends an undecorated octagonal zone is left, $\frac{1}{8}$ inch in breadth. This is followed by other two encircling incised lines, while a cord pattern surrounds the extreme ends. Unfortunately, the bead is imperfect, a portion having been broken off longitudinally on one side. The perforation is incomplete, and it would thus seem that the drilling of the hole had taken place after the decoration of the bead was finished. About one-half of the head of a pin (fig. 13, No. 31) came from section Q. There is a disc of jet (fig. 13, No. 33), measuring $1\frac{5}{16}$ inch in diameter and $\frac{7}{16}$ inch in thickness. It is roughly fashioned, and centred on both sides by a hole. One large wedge-shaped block, measuring about $3\frac{1}{2}$ inches in length, and a small flake about $2\frac{3}{16}$ inches in length, came from sections P and Q respectively. A flat irregularly shaped piece of lignite came from section Q, and shows striæ on one surface, having possibly been used as a polisher. Another small piece from the same section is roughly circular, and also shows striæ on one face.

Wood.—There is one small piece of wood, rectangular in shape, and measuring $1\frac{3}{8}$ inch in length and about 1 inch in breadth.

Stone.—A saddle quern was found in section P. It measures about 19 inches in length, $11\frac{1}{2}$ inches in breadth, and $6\frac{1}{4}$ inches in thickness, and has been hollowed out to a depth of $\frac{3}{8}$ inch. A sharpening-stone was found in section Q. It is worn down by use on two sides, and measures about 5 inches in length, $2\frac{5}{8}$ inches in breadth, and is $4\frac{1}{4}$ inches in thickness. There may also be recorded a pounder, which has been much used, made from a water-worn quartzite stone; and four polishers, or smoothing-stones. The last vary in length from about $5\frac{5}{8}$ inches to about 2 inches, and in some cases striation marks are visible on them. There is a large water-worn stone measuring 7 inches in length and showing considerable battering on its surface. It may also, however, have been used as a polisher. A number of friction marks, as though made by a cord, are noticeable along one edge. A similar feature was mentioned in our last year's report when describing stones of this nature.¹ Worth noting also are a fine-grained stone (fig. 13, No. 42) having two rounded and two straight sides which are not parallel, about $\frac{5}{16}$ inch in thickness and bevelled down on two opposite sides;² three hones, all nicely shaped, varying in length from $3\frac{3}{4}$ inches to $4\frac{3}{4}$ inches (fig. 13, Nos. 39 to 41); a fragment of a hone, only measuring about $2\frac{3}{16}$ inches in length, of fine-grained stone, and, where fractured, an effort has apparently been made to polish the break to a smooth surface; another small hone, only $1\frac{1}{4}$ inch in length, seems to have been used on all faces; a small

¹ *Proceedings*, vol. lvi. p. 248.

² Two similar stones were obtained last year and are illustrated in *Proceedings*, pp. 239 and 250, fig. 21, Nos. 6 and 8.

fine-grained stone of a slaty character, in the form of an isosceles triangle, flattened on two sides and measuring about $1\frac{1}{2}$ inch in length. Two small sling-stones (fig. 13, Nos. 35 and 36) came from section P, and two playing-men (fig. 13, Nos. 37 and 38) from section Q. They are of the usual size.

Whorls.—Three whorls, two of which are illustrated (fig. 13, Nos. 43 and 44), and portions of three others, came from sections P, Q, and O^a; a large jet whorl (fig. 13, No. 34), measuring $1\frac{1}{16}$ inch in diameter and $\frac{1}{16}$ inch in thickness, from section P. Another from section O^a is of micaceous sandstone, measuring $1\frac{5}{16}$ inch in diameter; while that from section Q, which is of a slaty material, only measures $1\frac{3}{8}$ inch in diameter. The fragments of three others do not merit description.

The following objects of iron may be noted as coming from section P:—

Iron.—A portion of the blade of a sword (fig. 18, No. 1) with a slight midrib, measuring at the fracture $1\frac{1}{4}$ inch in breadth and 7 inches in length to the point; the head of a weapon resembling a spear-head but having a blade of triangular section and a closed socket (fig. 18, No. 2), measuring $5\frac{5}{16}$ inches in total length (the head is $2\frac{1}{2}$ inches in length and the socket $2\frac{3}{8}$ inches; the sides of the head at the widest part measure $\frac{1}{16}$ inch across; the end of the socket, which is imperfect, measures about $\frac{5}{8}$ inch in external diameter);¹ a large oval loop with a stem (fig. 18, No. 3) measures $5\frac{7}{16}$ inches in length. The exterior of the loop, which is placed at right angles to the stem and is of rounded section, measures 3 inches in greatest length; a flat file with tang of rectangular section (fig. 18, No. 4), measuring 5 inches in total length, the tang, which is fragmentary, measuring only $\frac{1}{16}$ inch in length. From section Q came an S-shaped, hook-like object (fig. 18, No. 5) having a large rounded knob at one end, measuring across the curves $2\frac{3}{8}$ inches in length; a blade of a sickle with tang wanting (fig. 18, No. 6), measuring $4\frac{1}{8}$ inches across the inner curve and $\frac{1}{16}$ inch across the blade at the widest part; a knife-like object with a triangular blade and tang (fig. 18, No. 7), measuring 2 inches in length, and a chisel-like implement with rounded stem (fig. 18, No. 8), measuring $3\frac{3}{8}$ inches in length, came from section Q. There may also be mentioned a small irregularly shaped piece of hematite flattened at one end, which may have been used as a polisher.

Pottery.—A considerable quantity of Roman pottery came from all sections. Portions of the bases of three Samian ware bowls and about half the base of a vase may be noted. Several fragments show decoration,

¹ One from Newstead is in the Museum, but is not mentioned by James Curle in *A Roman Frontier Post*. It measures $5\frac{3}{8}$ inches in extreme length, the socket being $2\frac{3}{8}$ inches in length.

and on one small shard from O^s the potter's name, GATVS, is stamped.¹ Some shards of a mortarium, including portions of the rim, came from all sections. Several shards of a large vessel of thick reddish ware, including portions of the base, wall, and rim, came from section P. The body of the vessel has been decorated with three incised lines placed about $\frac{1}{8}$ inch apart, between which an irregular wavy line has been made

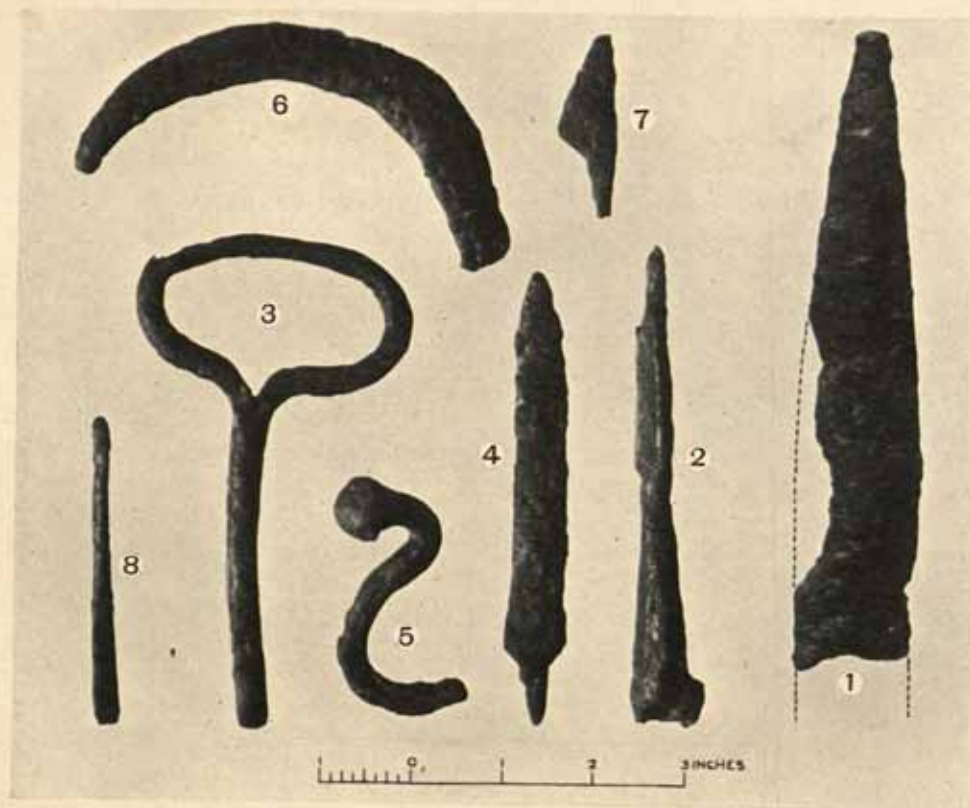


Fig. 18. Objects of Iron from the third level.

with a pointed stick. Other shards of this, or a vessel showing similar decoration, were found in 1920. The base of a vessel of reddish-brown ware, measuring $2\frac{3}{8}$ inches in diameter, shows the inside to have been finished with a lighter coloured slip. Several shards were recovered of the wall and rim of this vessel. The latter is everted, and it would appear that when complete the exterior lip diameter would have been about 5 inches. A number of shards of cooking-pot having the usual

¹ This potter's name was found at Alteburg.—Oswald and Pryce, *Terra Sigillata*, p. 114.

lattice-work decoration were brought to light, and many shards of other vessels whose form cannot be ascertained. Fragments of two pots of native ware were found. One consists of a portion of a bowl-shaped vessel from base to rim, which measures about $1\frac{7}{8}$ inch in height, while the external diameter at the rim seems to have been about 4 inches. The other is of hard texture, and is vesicular and porous in appearance. The base measures $3\frac{1}{8}$ inches in external diameter. Several other shards of the same vessel, and a large number of shards of coarse ware representing many vessels, were also recovered.

Crucibles.—The recovery this year from section Q of several portions of crucibles is of considerable interest and importance. These have been shallow vessels with rounded bases, much like the crucibles used at the present time for the melting or manufacturing of enamel, and evidently have been used for a similar purpose. Four crucibles, represented by portions of the rims and walls, would when complete have measured approximately $1\frac{5}{8}$, 2, $2\frac{5}{16}$, and $2\frac{1}{2}$ inches in internal diameter. The thickness of the rims respectively are $\frac{5}{16}$, $\frac{9}{32}$, $\frac{1}{4}$, and $\frac{5}{16}$ inch. The fragment of the second crucible mentioned includes a portion of the base, from which it has been possible to measure the approximate internal depth of the vessel, which has been $\frac{2}{3}$ inch. On the inside of the fragments mentioned a thickish coating of pigmented glass adheres to the surface; the colours suggested being red, yellow, and possibly blue. On one or two pieces the glass is coloured from a pale green to an almost transparent white, and in several cases this has splashed over to the outside of the vessel. The fact that pale green or transparent glass is shown on some of the fragments indicates that probably the glass was in a molten state in the vessel before the pigment was added. One piece shows clearly that glass was being melted after the vessel had been cracked, the molten glass having run through the crack and still adhering to the sides of the fracture. With the finding of this evidence of the melting of glass and making of enamel on the hill, it now seems beyond doubt that this form of ornamentation of at least many bronze objects was carried out locally by native workmen. This being established, the suggestion may be made that glass armlets, of which we have found so many segments, have also been manufactured on the hill. The finding of a small rod of glass in 1915¹ first suggested to us the melting of glass on Traprain, but further proof was lacking until the above-mentioned crucibles were found. We are much indebted to Mr Balsillie, of the Royal Scottish Museum, for his kindness in making an analysis of some of the glass found, and his report is as follows:—

¹ *Proceedings*, vol. I. p. 110, fig. 26, No. 11.

"The materials submitted by Mr Cree from the excavations at Traprain Law have now been subjected to careful examination; these included:—

- (1) Fragments of a substance that looked like old pottery.
- (2) Portions of coloured glass armlets.
- (3) Piece of dark slag.
- (4) Fragment of whitish-grey rock.

What has been found in reference to these is as follows:—

(1) The fragments of what seem at first inspection to be old pottery are undoubtedly the remains of some small vessels that have been used for the melting of glass. The shape of these vessels appears to have been approximately hemispherical, and their size, judging from the curvature of some of the pieces, something under 35 mm. radius. The substance of which they are composed has probably been a grey fireclay, now, however, with an infusion of vitreous material. Abundant evidence of the glass-melting operations that have formerly been carried on in these crucibles is furnished by the coating of glass that here and there can be seen adhering to their surfaces, sometimes to a thickness of 1 mm. The glass is occasionally colourless, of refractive index 1.522, quite isotropic, and is likely a simple alkali-lime-silicate glass just such as might be expected. It is interesting to note that on the interior surfaces of the vessels the glass is often pigmented, whereas on the exterior the medium is uncoloured. Apparently various metallic oxides were being introduced into the melts, but this only after complete fusion of the glass essentials, and after a melt had had time to creep over the upper edges of the crucible or escape through some small fissure on to the outside. What the pigmenting substances have been it would not be possible to ascertain without destroying the relics.

(2) An examination of the coloured glasses submitted has not been an entirely simple matter, but from the first samples it was easily possible to ascertain that the colour of the yellow glass was attributable to lead. An analysis of the blue glass, however, did not yield sufficient evidence of cobalt to sanction the assertion of the presence of that element, which the colour certainly suggested. Under the circumstances it was considered advisable to get another opinion, and what remained of the material was therefore submitted to Dr Leonard Dobbin, of the Chemistry Department, Edinburgh University, who very kindly made an independent and careful examination. He likewise was not able to establish the presence of cobalt, but thought that analysis of a larger sample might yield more convincing evidence.

(3) The dark slag contains lead and copper.

(4) The rounded fragment of whitish-grey rock is a piece of one of the Lower Carboniferous marine limestones which here and there are known to occur in the vicinity of Traprain. The possibility is that such a substance, ground to a powder, may have been used in the glass-making operations mentioned above.

I should like to record my indebtedness to Dr Dobbin for valuable assistance in carrying out the above analyses. DAVID BALSILLIE."

Coin.—Third brass of Titus (A.D. 71-81).

RELICS FROM THE SECOND LEVEL.

Relics from this level are grouped together on fig. 19.

Objects of Flint.—A leaf-shaped arrow-head of dark brown flint (fig. 19, No. 1), measuring $1\frac{1}{2}$ inch in length and about $\frac{9}{16}$ inch in breadth, nicely worked on both sides, but with the point awanting, and three flakes and one nodule, comprise the total finds from this level referable to the Neolithic culture.

Silver.—From section Q there came a pin, the head of which is missing, measuring $1\frac{1}{8}$ inch in length, and a semicircular piece of fine wire, measuring about $\frac{3}{8}$ inch in diameter.

Bronze:—Fibulae.—A fibula of very uncommon form of the cross-bow type (fig. 19, No. 2, and fig. 20, No. 1), and probably of Roman provincial manufacture, came from section Q. It is devoid of ornamentation, but seems to have been gilt. From the head to the foot it measures $2\frac{3}{8}$ inches, and the vertical height of the bow to the top is 1 inch. The catch-plate, which measures $\frac{1}{2}$ inch in length, is flat on both upper and under surfaces; and while the upper surface of the bow is also flat, the under side is nicely rounded. At the back of the catch-plate, the slot for receiving the pin is wide and trumpet-shaped; while a rounded semicircular moulding is placed at the entrance, to act as a guide for the pin. The head of the fibula is formed of a semi-cylindrical casing, and measures about $1\frac{3}{8}$ inch in length. This has served as a covering for the spring which governed the pin, but both spring and pin are missing. A small penannular brooch which came from section P (fig. 19, No. 3) is finely patinated, and has the usual fluted terminal knobs. It is slightly crushed, so that the two knobs overlap, and the pin is awanting.

Pins.—The head and part of the shank of a pin (fig. 19, No. 4, and fig. 20, No. 3) also came from section P. The head, although incomplete, is circular, and measures $\frac{9}{16}$ inch in diameter. It is decorated with a series of transverse lines placed at somewhat irregular intervals, giving the appearance of small beads. A large pin, the point of which is

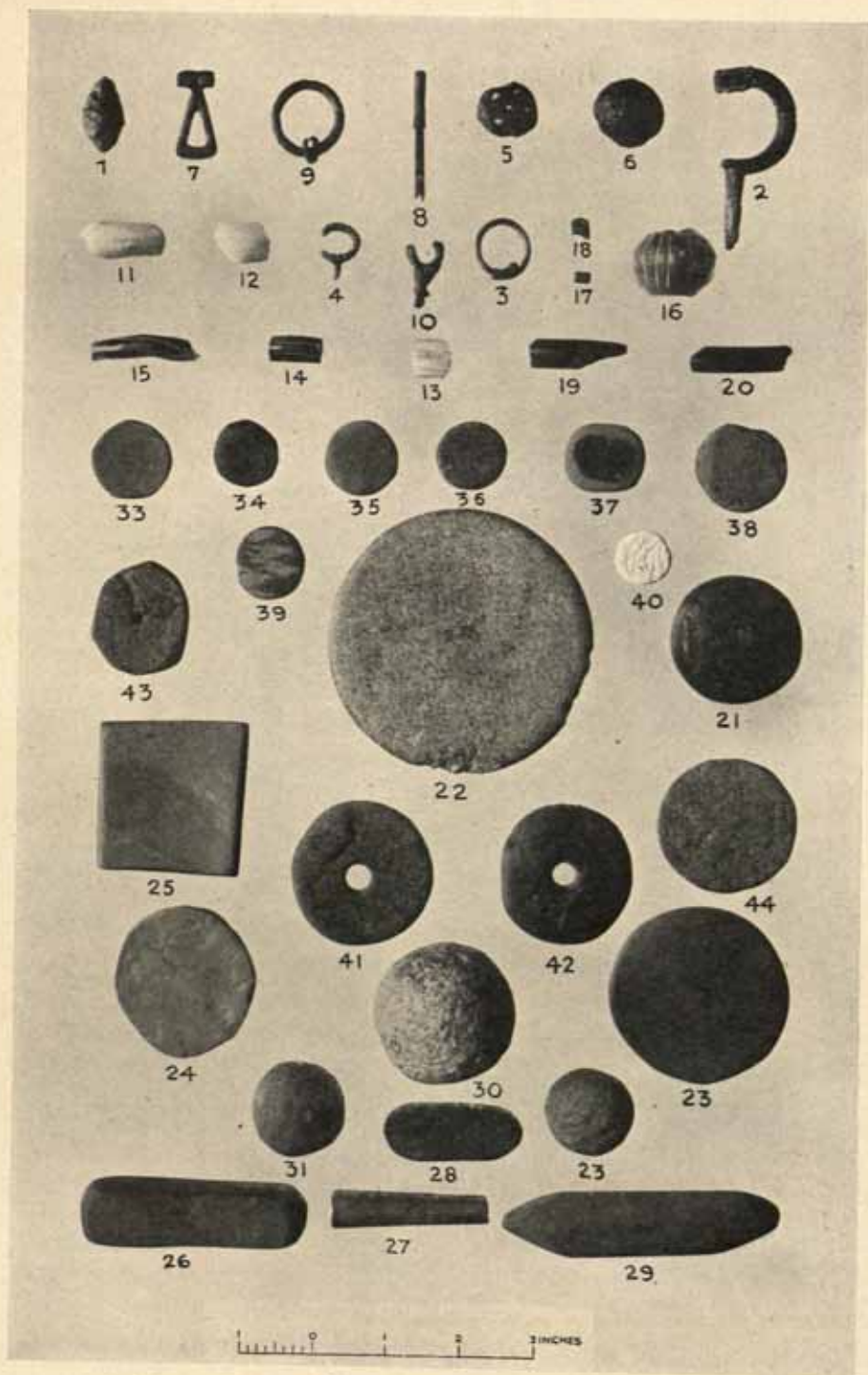


Fig. 19. Relics (other than of Iron) from the second level. (3.)

awanting, was found on section P. It has a squared zoomorphic head and snout, and measures $3\frac{7}{8}$ inches in length.¹

Finger Ring.—The mount and portion of both shoulders of a large finger ring (fig. 19, No. 5, and fig. 20, No. 2) came from section Q. The diameter of the mount is $\frac{3}{4}$ inch, and this is filled with a bright blue enamel setting measuring $\frac{1}{8}$ inch in diameter. Into this is inserted a central spot of opaque white, which is surrounded by five spots of the same material, placed towards the periphery of the setting.

Harness Mounting.—One object which may have been a harness

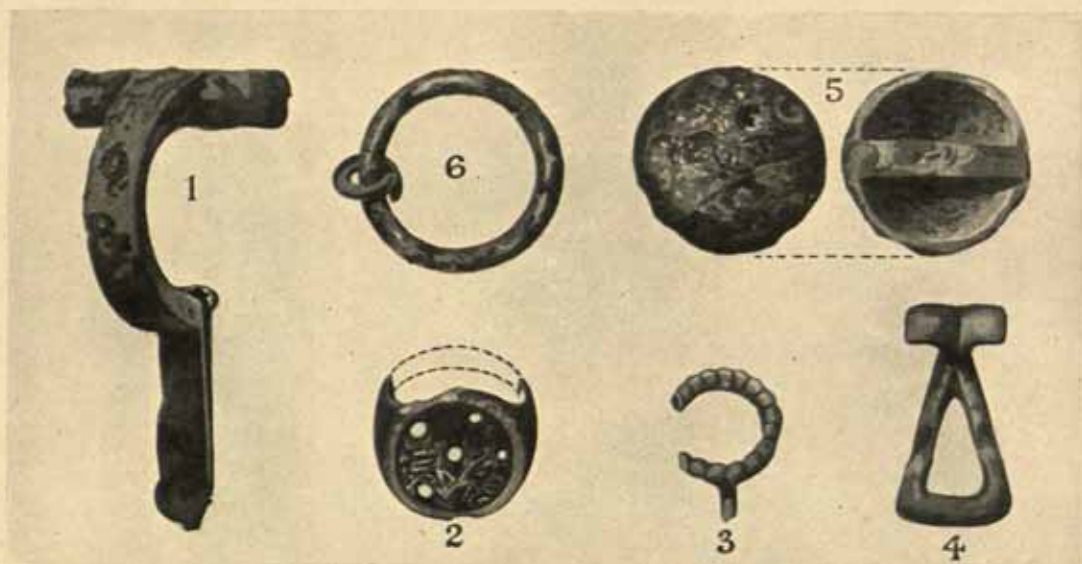


Fig. 20. Objects of Bronze from the second level. (f.)

mounting (fig. 19, No. 6, and fig. 20, No. 5) was found on section P. It is convex on the upper side, measuring about $\frac{15}{16}$ inch in diameter, and on the opposite side, which is concave, it is crossed by a single bar, possibly for purposes of attachment.

Miscellaneous Relics of Bronze.—From section Q came a dress fastener, the head of which is small and of unusual form (fig. 19, No. 17, and fig. 20, No. 4). The loop is triangular, and the head is formed of a piece of metal measuring $\frac{1}{2}$ inch in length and about $\frac{3}{16}$ inch in breadth. It is rounded on the upper side, where it is crossed in the centre by a deep groove; the under side is flat. This type is new to Traprain. A grattoir with handle, which has all been cast in one piece, came from

¹ Three pins of this type were found in 1915, and are illustrated in *Proceedings*, vol. 1. fig. 23, Nos. 6, 9A, and 9B, and also on p. 101, fig. 24.

section Q (fig. 19, No. 8, and fig. 23, No. 1). It measures $1\frac{1}{4}$ inch in length. The handle is circular in cross section and is $\frac{3}{4}$ inch in length. It is ornamented by two incised lines placed close together in the centre, while two similar lines encircle the handle, both at the head and foot. The stem, which is rectangular in cross section, is ornamented on all sides by incised lines. A ring (fig. 19, No. 9, and fig. 20, No. 6), measuring 1 inch in diameter, is a flattened oval in cross section. A small link is attached, the ends of which slightly overlap. A few fragments which seem to have been part of a shallow cup came from section Q. The thickness of the metal at the rim is little over $\frac{1}{16}$ inch. Several thin flat

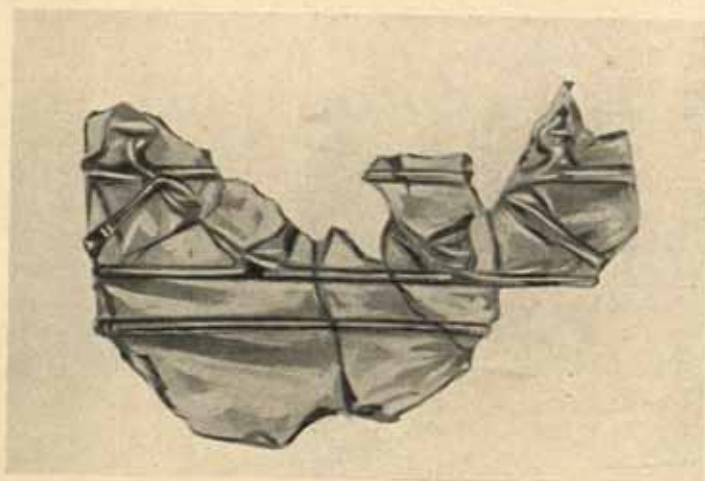


Fig. 21. Fragment of Glass Vessel. (3.)

pieces of bronze and two or three indeterminate pieces, together with one piece of waste metal, complete the objects of bronze from this level.

Glass.—There are six segments of armlets to be recorded (fig. 19, Nos. 11 to 15). Two small fragments are of opaque white, another of opaque yellow, while a fourth is a fragment of opaque white having a pale blue ornamentation on its surface. The remaining two segments are of green translucent glass, one being ornamented with opaque white enamel. This piece is somewhat twisted, possibly through the action of fire. Several fragments of a vessel of Roman manufacture are of a greenish transparency (fig. 21). They are about $\frac{1}{16}$ inch in thickness, and have been decorated by thin rods of glass applied to the outer surface horizontally and also obliquely. Several other fragments of glass of Roman manufacture include a portion of the rim of a bottle. When complete the rim would have measured about $1\frac{7}{8}$ inch in internal diameter.

It is of a light pea-green colour. About half of a large dark blue melon-shaped bead (fig. 19, No. 16) came from section O^a. It measures about $\frac{7}{8}$ inch in length. Beads of native manufacture include one of a yellow-



Fig. 22. Glass Beads. (f.)

green colour and hexagonal form measuring $\frac{7}{8}$ inch in length (fig. 22). Another, which is fragmentary, is bluish-green, and is also hexagonal (fig. 22). These, it may be noted, are the only examples of beads of this form so far recovered from Traprain. A small fragment of a bead of bright bluish colour merits no description.

Lead.—This metal is represented by a rod of circular section measuring $2\frac{3}{4}$ inches in length.

Jet or Lignite.—Two small segments of armlets (fig. 19, Nos. 19 and 20), both of which are triangular in cross section, are all that were recovered from this level. One came from section P and the other from section Q. A small irregularly shaped piece of jet measures about $1\frac{1}{16}$ inch in length, and has apparently been roughly dressed by a file, except at one side, which seems to have been fractured. A large piece of jet of circular form (fig. 19, No. 21) measures $1\frac{3}{4}$ inch in diameter and about 1 inch in thickness. At both sides the piece has been cut down towards the centre by some tool, after which apparently it has been broken off from the adjoining block, and the sides have been further bevelled by a small gouge. This object possibly may have been intended for a ring or whorl, but in either case it is only in process of manufacture. One roughly circular disc of lignite measures $1\frac{1}{2}$ inch in diameter; while three unfashioned pieces require no description.

Stone.—From section P came three discs (fig. 19, Nos. 22 to 24); the largest is of spotted slate, measuring $3\frac{9}{16}$ inches in diameter and $\frac{1}{4}$ inch in thickness. On one side, for a distance of $\frac{3}{4}$ inch from the periphery, the surface rises gently, and it is then slightly hollowed towards the centre; on the opposite side, two faint ridges cross the stone and form a large



Fig. 23. Bronze Grattoirs. (f.)

right angle, inside of which it is again slightly hollowed towards the centre. Both faces have been polished. Another, which is not so completely circular, is of a fine-grained micaceous sandstone. It measures $2\frac{5}{16}$ inches in diameter and about $\frac{5}{16}$ inch in thickness. It is flat only on one side, the opposite side being uneven. The third is still more roughly fashioned, and is more ovoid than circular in form. It is also made of fine-grained sandstone and is unevenly finished on both faces. Neither of the last two discs mentioned is hollow in the centre. Another came from section Q. It measures about $1\frac{3}{8}$ inch in diameter and $\frac{7}{32}$ inch in thickness. On one surface it is smooth; on the other it is slightly rough. About a quarter of another disc, which when complete would have measured about $3\frac{1}{2}$ inches, is made of a fine-grained reddish sandstone. On both faces it has been smoothed approximately to a level surface.¹ It is worthy of record that altogether nine complete discs have been recovered from the excavations at Traprain. Of these, seven are definitely known to have come from the second level; while two are mentioned as coming from the first or top level, but these might easily have been referable to the top of the second level, and therefore their occurrence may be given a fourth-century attribution, as none has been found below the second level. Other relics of stone are a fine-grained piece of sandstone approximately square (fig. 19, No. 25), measuring $2\frac{1}{16}$ inches and about $\frac{1}{4}$ inch in thickness, of which one face is flat, while the opposite side is considerably hollowed towards the centre; eight polishing-stones, several of which show marks of friction on their surfaces, as though made by a cord, vary in length from $5\frac{1}{4}$ inches to about $3\frac{1}{2}$ inches; one hone (fig. 19, No. 26), measuring $3\frac{1}{16}$ inches in length, apparently considerably used, of a fine-grained sandstone, square in section, and at one end rounded to a blunt point, while the other has been squared; another small hone (fig. 19, No. 29), measuring $3\frac{1}{16}$ inches in length, faceted and brought to blunt points at both ends, while on one face it has been considerably hollowed by use; a third hone (fig. 19, No. 27) of a fine-grained slaty stone, $2\frac{1}{8}$ inches in length, at one end bevelled away from both upper and under sides to a blunt point, with a small groove $\frac{5}{32}$ inch in width in the centre, and one side of the stone bevelled from the upper surface nearly to the base, while left vertical on the other; a small stone, coloured by red iron oxide (fig. 19, No. 28), of fine texture, and measuring $1\frac{7}{8}$ inch in length, showing marks of

¹ Polished stone discs have been found in various brochs and are now in the National Museum. The undernoted have been found on Traprain:—One, in 1914, is known to have come from the first level (*Proceedings*, vol. xlix. p. 191, fig. 38, No. 9). Another, obtained in 1919, having a diameter of $1\frac{1}{2}$ inch, is noted (*Ibid.*, vol. liv. p. 97, fig. 22, No. 17); it is recorded as coming from the first level. Three others are noted in 1920, all from the second level (*Ibid.*, vol. lv. p. 191, fig. 20, Nos. 59 to 61).

striation on both sides and rubbed to an edge at both ends; a sharpening-stone, measuring about 3 inches in length and made of a coarse-grained sandstone; another of a very coarse-grained stone, measuring $5\frac{1}{4}$ inches in length and flat on one face; a third, somewhat pear-shaped, with several smooth facets on its surface and showing battering on one end; a small polisher, made from a broken pebble, smoothed on the under surface; a pot-lid of sandstone, measuring about $2\frac{5}{8}$ inches in diameter; a small segment of a circular object of fine-grained sandstone, measuring about $1\frac{9}{16}$ inch in length and $\frac{1}{8}\frac{1}{2}$ inch in thickness, having on both upper and under surfaces a deeply cut groove, with a similar groove cut round the periphery; three sling-stones (fig. 19, Nos. 30 to 32), one measuring $1\frac{3}{4}$ inch in diameter, another $1\frac{3}{16}$ inch, and the third about $1\frac{1}{8}$ inch; thirteen playing-men of stone (fig. 19, Nos. 33 to 40), some fashioned, while others seem naturally rounded pebbles—one is of coprolite (fig. 19, No. 40), and measures only $\frac{11}{16}$ inch in diameter.

Whorls.—Two complete whorls came from this level (fig. 19, Nos. 41 and 42)—one of sandstone from section P and one of lignite from section Q. A fragment of another, from the latter section, also made of lignite, may be recorded; while there is also a discoidal object of sandstone, having a hole which is only sunk a short depth in the centre of one face, and which may possibly have been intended for a whorl.

Iron.—A socketed spear-head (fig. 24, No. 1), measuring $5\frac{3}{8}$ inches in length, with a blade, which has a slight midrib, measuring $3\frac{1}{8}$ inches in length and across the broadest part $1\frac{3}{8}$ inch—the socket, which is closed, measures $\frac{11}{8}$ inch in external diameter; a portion of a blade, which has a slight midrib (fig. 24, No. 3), measuring $3\frac{11}{16}$ inches in length and $\frac{9}{16}$ inch in breadth; a socket, with remains of a tanged file (fig. 24, No. 4), which is circular in cross section, from section Q (the socket measures $1\frac{5}{8}$ inch in length, while the file is $\frac{5}{8}$ inch in diameter; on one side these sharp furrows still remain for $\frac{3}{8}$ inch in length); one loop with long stem (fig. 24, No. 5),¹ measuring $4\frac{1}{2}$ inches in length, and another with the loop broken and the stem fragmentary; a knife with tang complete (fig. 24, No. 2), measuring $9\frac{5}{16}$ inches in total length, having a blade $5\frac{7}{16}$ inches in length, 1 inch across at its broadest part, and curved backwards at the point, with a tang square in cross section, measuring $3\frac{11}{16}$ inches;² the blade of another knife, measuring $3\frac{7}{16}$ inches in length and $1\frac{3}{16}$ inch across the widest part, with about $\frac{1}{2}$ inch of the tang remaining.

Moulds.—A portion of a clay mould, which seems to have been for the casting of a spear-butt. A similar object was found in 1919.³

¹ An identical object was found in 1915 (*Proceedings*, vol. I. p. 120, fig. 34, No. 1).

² A knife of somewhat similar type is noted in *Wookey Hole*, by H. C. Balch, p. 85, fig. 8.

³ *Proceedings*, vol. liv. p. 89, fig. 20.

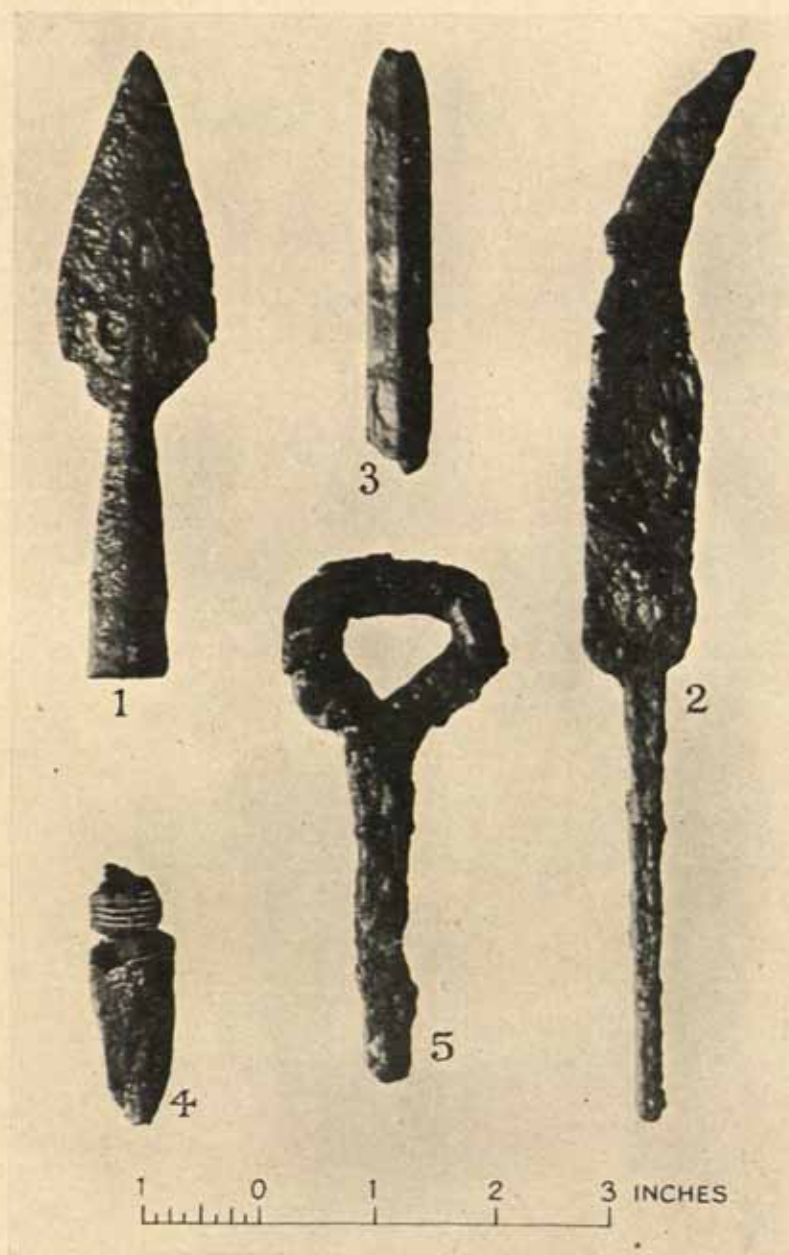


Fig. 24. Objects of Iron from the second level.

A few other portions of moulds found are too fragmentary for description.

Pottery.—The Roman pottery includes several pieces of decorated and undecorated Samian ware. One object which deserves special mention is an appliqué lion-faced spout of a deversorium or mortarium with an upright rim. From the edge of the mask radiate a series of diagonal incised lines. This form of deversorium was manufactured both in Central and East Gaul, and the lion mask appears to characterise the examples notably from Trèves. No example was found at Newstead, but one was found at Housesteads. It is supposed to belong to the latter part of the second century and the early part of the third, but a specimen



Fig. 25. Lion-faced Spout of Samian Ware. (l.)

discovered in a grave at Vermand takes it down to a date between A.D. 276 and 400 (fig. 25).¹ A portion of the base and base rim of a bowl and a number of other small fragments were recovered. Two playing-men (fig. 19, No. 37) may here be mentioned, both of which are fashioned from shards of Samian ware. Several fragments of a mortarium came from all three sections; and we have also recovered shards of thickish red ware, which is orna-

mented by three parallel incised lines, placed horizontally round the vessel, between which two wavy lines have been made with a pointed stick. Other shards belonging to this vessel were found on the level below, and have also been found in previous years. A piece of the rim and wall of a large wheel-made dish or bowl was recovered, made of a reddish-brown paste and showing traces of fire on the outside. The rim is flattish and has a single groove inside. Some fragments of this vessel were found last year on the same horizon, and have now been joined to the pieces mentioned. Two shards, now joined together, of the body of a dark grey globular vessel, are ornamented with three shallow grooves, placed close together horizontally. The shards are of hard texture and have been well fired. One small fragment, the body of which is of a grey colour, is covered on the outside with a red slip and has been ornamented by three parallel lines made with a roulette. The inside of the shard is covered with a grey slip. In addition to the above, there are many shards of cooking-pots ornamented

¹ Oswald and Pryce, *An Introduction to the Study of Terra Sigillata*, p. 216.

as usual with a lattice-work design; some of these show a sooty incrustation on their outer surface. A considerable number of fragments of other wheel-made vessels also came to light. Native pottery is as usual plentiful, but only two or three shards require to be described. On the level below, a number of pieces, including the base of a vessel of vesicular texture, were mentioned. Several fragments of the same character were also found on this level. One shard which came from O^a deserves notice. It is of the usual coarse character, and an apparent attempt at decoration has been made. Lines, more or less parallel, have been drawn with a pointed stick; while other lines cross these, suggesting lattice-work.

Crucibles.—Several fragments were recovered from this level. Of these, three are especially worth noting, as they are portions of shallow cup-like vessels similar to those found on the third level in section Q, and which have already been described. When complete, the internal diameter at the rims of the vessels mentioned would be approximately 2, 2, and $1\frac{1}{2}$ inches, while the thickness of the rims are respectively $\frac{5}{16}$, $\frac{5}{32}$, and $\frac{5}{32}$ inch. The last and smallest fragment mentioned has had an internal depth of only $\frac{2}{3}\frac{7}{8}$ inch, and is thickly coated with a bluish-green pigmented glass; another shows a dark blue glaze on the interior surface. Two or three other small fragments are coated on the inside with a yellow glaze.

Coins.—Third brass, probably of Hadrian, and another of Galerius Maximianus (A.D. 305-11); a small brass of Gallienus (A.D. 253-68), and another of the Constantine Age with head of Constantinopolis.

RELICS FROM THE FIRST LEVEL.

Relics from this level are, as usual, sparse, and are grouped together on fig. 26.

Bronze.—A pin having no head (fig. 26, No. 1) measures $3\frac{5}{16}$ inches in length; it is $\frac{5}{32}$ inch in thickness at one end and tapers to a point at the other.

Miscellaneous Relics of Bronze.—A grattoir, which is finely patinated and cast in one piece (fig. 26, No. 2, and fig. 23, No. 2), measuring $2\frac{9}{16}$ inches in length, came from section P. The handle, at the end of which is a small loop now slightly broken, is circular in cross section, and measures about $1\frac{3}{8}$ inch in length and $\frac{5}{32}$ inch in diameter. The stem or shank, which is rectangular in cross section, measures about $1\frac{1}{16}$ inch in length. The ornamentation round the top of the handle consists of five grooves placed closely together; this is followed by a narrow band ornamented with a zigzag pattern, below which are four more grooves. In the

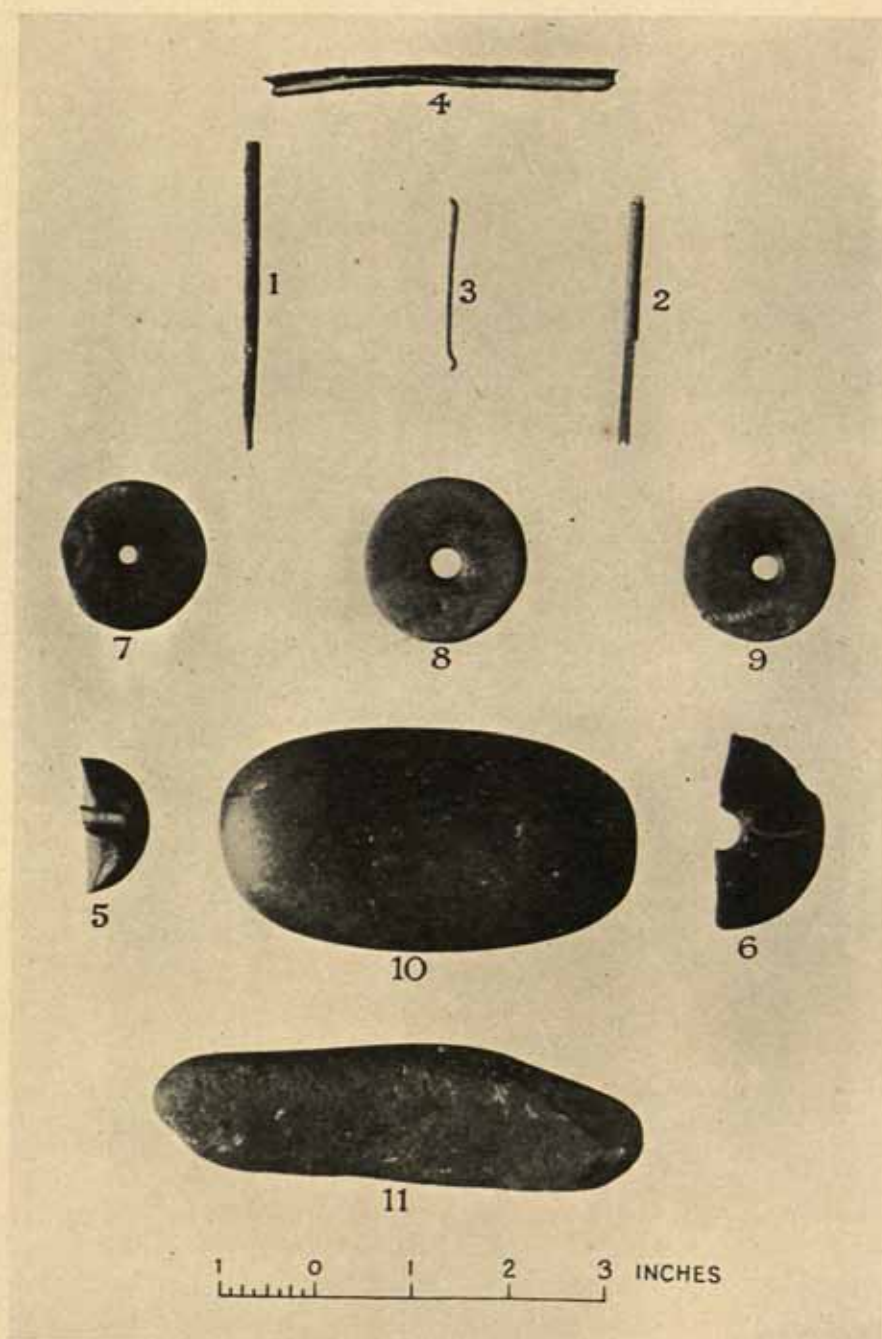


Fig. 23. Relics (other than of Iron) from the first (highest) level. (3.)

centre of the handle is a group of six grooves, which are crossed diagonally by others, giving the appearance of engine-turning. At the base of the handle is another group of six grooves; the mouldings constituted by these on the upper and lower sides are left plain, while the four grooves in the centre are, as in the case of the decoration in the middle of the handle, crossed by diagonal lines, giving the engine-turned effect as above mentioned. Above the bifurcation the stem or shank is crossed at regular intervals by two incised lines. These are carried completely round, and other incised lines cross diagonally the spaces between in such a way that the pattern on each face and side forms a complete lozenge.¹ About one-half of a pair of tweezers (fig. 26, No. 3), measuring $1\frac{1}{4}$ inch in length, also came from section P. One piece of binding, which might have been used to protect the edge of a leather shield or scabbard (fig. 26, No. 4), measuring $3\frac{1}{2}$ inches in length, came from section O^a.

Glass.—One small fragment of opaque white glass armlet, a few fragments of greenish glass, and one of a pale yellowish-green colour may be noted. One of the small pieces of greenish glass, about $\frac{1}{8}$ inch in length, seems to have been a drop.

Jet or Lignite.—About half of the head of a pin (fig. 26, No. 5) seems to have been in the usual form of a flattened spheroid, and measures $1\frac{3}{8}$ inch in diameter. An irregularly shaped piece of lignite shows tool marks on one surface.

Stone.—Two sharpening-stones (fig. 26, No. 11), each 5 inches in length; a fine polishing-stone (fig. 26, No. 10), in shape an elongated oval, flattened at both ends and sides, and measuring $4\frac{1}{4}$ inches in length; a roughly circular piece of sandstone, measuring $1\frac{3}{4}$ inch in diameter and $\frac{1}{16}$ inch in thickness.

Whorls.—Three whorls and half of another were recovered (fig. 26, Nos. 6 to 9). Two are of stone, while the third and remains of the fourth are of lignite.

Iron.—The handle and upper part of the blade of two large knives, and the point of one of them (fig. 27), came from section Q. The blades are heavy and single edged, the back is thick, and there is a broad groove close under it on one side. The edge and the back are straight and parallel, except near the point, where the cutting edge curves downward very slightly, and the back more sharply to form the point. In both cases the tang of the hilt is square in cross section, and has a projection in front $1\frac{1}{4}$ inch above the commencement of the blade. The hilt terminates in a pommel, formed by a broad ring which narrows

¹ A similar grattoir is illustrated in Wilde's *Catalogue of Antiquities* in the Royal Irish Academy, p. 549, fig. 434.

slightly where it crosses the end of the tang. Both pommels, which are imperfect, are fixed in position by a stout cotter pin which penetrates the tang; and although one has been bent in so as to suggest an antennæ-shaped pommel, it seems more likely that both were completely annular. One knife measures $10\frac{1}{4}$ inches in total length, the tang 7 inches, and the breadth of the blade $1\frac{7}{8}$ inch. About $5\frac{1}{2}$ inches of the point also remains. The other measures $7\frac{1}{8}$ inches in total length, the tang being $6\frac{3}{4}$ inches. The size and general character of these knives resembling weapons rather than tools suggest at once an analogy with the Teutonic scramasaxes; but there the analogy stops, for in details they do not correspond. So far as we have been able to learn, parallels

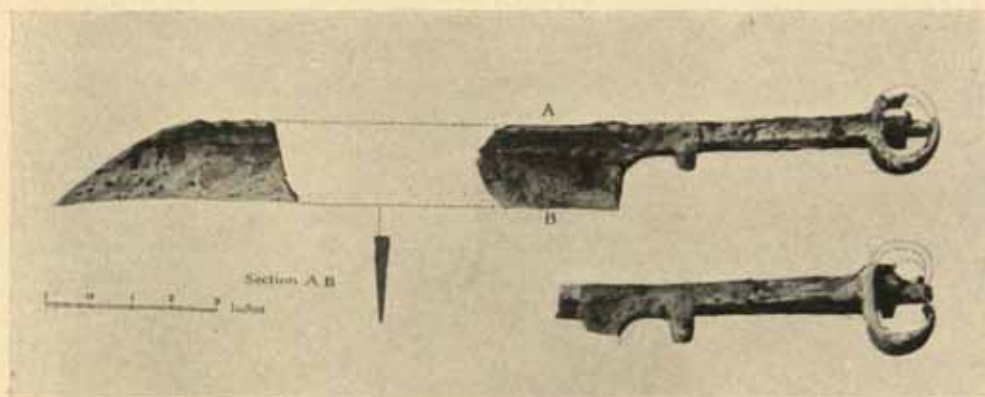


Fig. 27. Iron Knives.

to these knives have not been found in continental or home museums or in archaeological literature.

Pottery.—As is usual on the top level, the amount of Roman and native pottery found was small. We have several fragments of the base of a large Samian ware bowl, together with several other fragments of the same material, one shard of which is decorated. A small fragment of a vessel of Rhenish ware, which has not been represented since 1914, and the portion of the neck of a bottle of reddish ware, is the only Roman pottery worth mentioning. Native pottery is of little consequence, and includes a few shards of the usual coarse character and one fragment of vesicular ware, of which other similar shards were noted both from the second and third levels.

While removing the turf and soil covering the top level of section P, an iron spur was found in a fairly good state of preservation. It measures $5\frac{1}{4}$ inches in total length. The sides, which are rounded on the outside and flat on the inside, have a spread of $2\frac{3}{4}$ inches and are

considerably depressed. At the termination of the sides are two circular perforations, and at the end of one are the remains of a hook for strap attachment. The neck measures $1\frac{1}{2}$ inch in length, and the rowel, which has eight points, measures $1\frac{3}{4}$ inch in diameter. This spur has no connection with the relics from the last level of occupation, and may be given a fourteenth-century attribution.

EXAMINATION OF THE TANK OR RESERVOIR.

Taking advantage of some exceptionally dry weather towards the end of June, work on the natural terrace was discontinued for a couple of days and excavation of a tank was commenced, which is situated about 100 feet slightly to the east of south of the cairn on the summit of the hill. This reservoir has been formed in a natural oval basin, the south side and east end of which consists of the natural rock; while on the north side it is bordered by a number of large slabs set on end, many of which protruded through the turf. At the west end two lines of stones are placed about 30 feet apart, and these widen slightly outwards. The purpose of these stones was possibly to form a solid foundation or edging for turf walls, which, with the natural rock already mentioned, completely enclosed the tank, and also formed a lane into it from the west. At the east, advantage seems to have been taken of a depression or cleft in the rock, through which the overflow may have been led. The source of supply must have been principally by infiltration of rain-water. Roughly, about two-thirds of the area was excavated. From the present surface, about 10 inches to 1 foot of soil was removed, beneath which the bottom was found to consist of a stiff, compact, bluish clay. This reservoir would no doubt be of inestimable value to the inhabitants of the hill; for beyond two so-called springs, one on the north side of the summit and one on the south, which, however, are merely fed by surface water and are nearly dry in a dry season, no other supply exists on the hill. The relics, all of which were found lying immediately above the clay described, were comparatively few, and owing to this fact, it was considered inadvisable to complete the excavation of the whole area. The objects recovered were as follows:—

Bronze.—The principal object found is of uncertain use. It is square in cross section (fig. 28), and bent at right angles about the centre. The head is formed of a nicely rounded loop, which is squared where it joins the stem. A deep groove flanked by two narrow grooves encircles the loop to the shoulders. On the outer edge of the loop are a number of short incised lines giving a cord-like appearance. Below the head for a distance of $\frac{3}{16}$ inch the stem is crossed by a series of narrow

incised lines. From this point towards the bend are three slightly raised longitudinal mouldings. From the bend for a distance of $\frac{5}{8}$ inch is a further group of transverse incised lines. Here there is a washer about $\frac{5}{8}$ inch square, and slightly convex on the side facing the point, which extends for a further distance of $\frac{1}{8}$ inch. It is suggested that the point of this object has been possibly driven into wood, and the washer would prevent its being driven in too far. From the position of the ornamentation it is probable that the loop was placed downwards. Two fragments also found when joined together form one side of a pair of tweezers.



Fig. 28. Bronze Object. (1.)

Lignite.—A small whorl, measuring about $1\frac{1}{4}$ inch in diameter.

Stone.—One hone, which is fractured on one side, is of a fine-grained stone, and has been faceted in several places; two other smoothing- or polishing-stones, one of which shows abrasions at one end, and one sling-stone, which measures about $1\frac{5}{8}$ inch in diameter.

Iron.—Two horse-shoes: one having four nail holes on each side and without calks, measures $5\frac{1}{2}$ inches in length and $5\frac{1}{4}$ inches in width across the heels; the other, having three nail holes on each side and small calks, measures $4\frac{7}{8}$ inches in length and 4 inches across the heels.

Moulds.—A fragment of a mould for the casting of a blade has had a hole running longitudinally under the matrix, for the purpose of reinforcing the mould by means of the introduction of a bronze rod. It will be remembered that last year, the question of reinforcing moulds for the casting of bronze swords was gone into at some length. It would seem that the fragment at present described is a part of a mould for the casting of a long blade, possibly a sword, in which case it is probably referable to the late Bronze Age.

Pottery.—Several fragments of a large vessel of native ware were recovered. These are of very coarse texture and the paste contains many stones. Three or four fragments of mediæval pottery, showing a green glaze on their outer surface, need not be described, and are probably referable to the period in the fifteenth and sixteenth centuries when a watch-beacon was maintained on the hill.

EXAMINATION OF GATEWAY THROUGH RAMPART.

Having completed the excavation of the ground on the natural terrace, which it was arranged should be opened this year, and there

being still some time to spare before the closing down of the work for the season, it was considered advisable to carry out some excavations at one of the gateways penetrating the rampart at the west end of

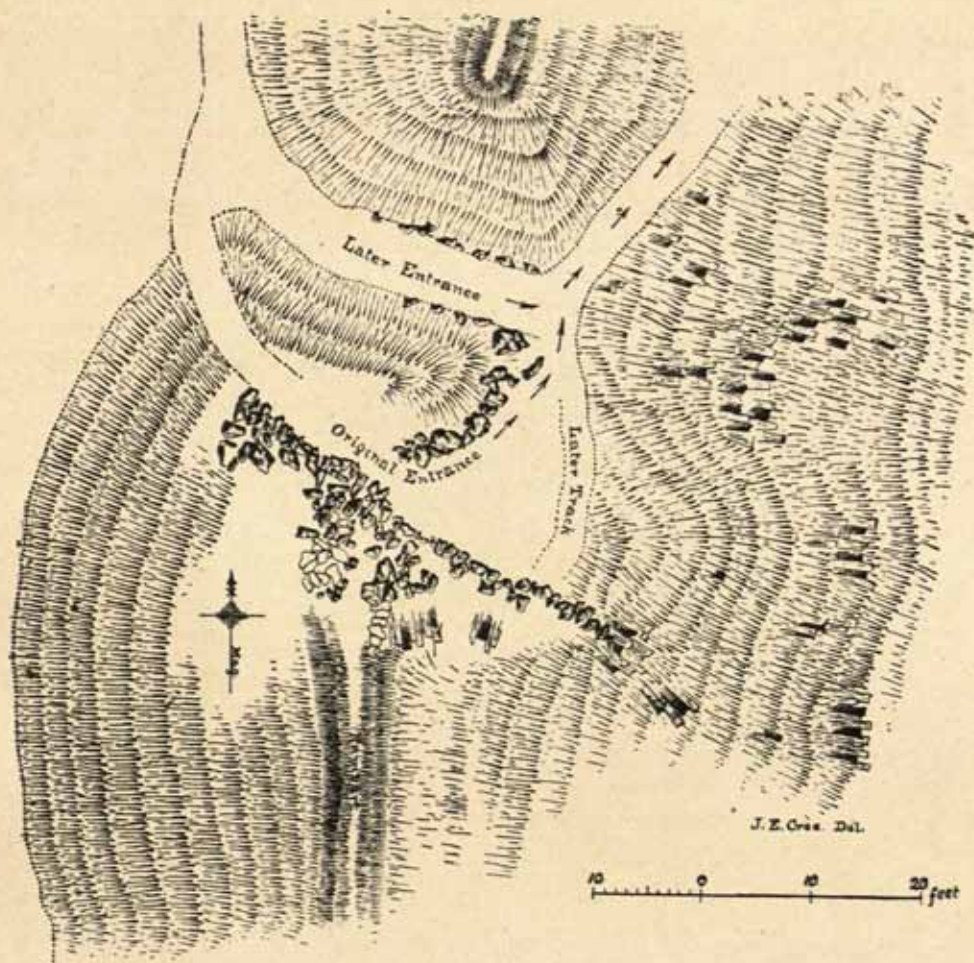


Fig. 29. Plan of Gateway.

the hill. These gateways, it may be remembered, are four in number; two being close together towards the south-west, while the other two, also placed a short distance apart, lie to the north-east of these. The one selected for examination was the more northerly of the first pair mentioned. A depression in line with the top of the rampart, and about 20 feet from the entrance, seemed to suggest a guard-chamber,

and it was thought desirable to obtain information on the subject and definitely determine the nature of the structure.

After removing a considerable quantity of soil and stones, it was ascertained that the hollow mentioned had no reference to a guard-chamber, and no such structure was found to exist during our excavation. Returning then to the entrance, at a point where the road bends up the hill to the north-east and where a track lay almost due south, the soil to the natural rubble was removed in a south-westerly direction (fig. 29). On the west side, a crescentic formation of stones of considerable size extended towards the south-west. A few feet distant from



Fig. 30. Section of Wall near Entrance.

the end of this formation, a line of stones was encountered lying in a north-westerly and south-easterly direction. It proved to be the foundation of a wall built of large stones set in a mixture of soil and yellow clay. This wall was followed towards the south-east, where it was found to abut on natural rock projecting from the slope of the hill. Following the building to the north-west, the wall terminated some 15 feet from the end of the crescentic setting of stones already mentioned; its total length being 42 feet 6 inches. The wall, at what appeared to have been the original entrance, was still about 6 feet 4 inches in height (fig. 30). At this entrance, as will be seen on plan, the original roadway appeared to turn somewhat sharply towards the north-east. On the rising ground, about 15 feet up the hill-side, was a sloping plateau, formed on the lower or western side by projecting rocks, above which the ground rose in an easterly direction. This would no doubt be of advantage in guarding the entrance should

occasion require. Our excavations did not disclose when this entrance was discontinued or found to be undesirable; but the fact remains that for some reason a new entrance was made a little further to the north; while the original entrance was covered over, and the roadway filled in to the required depth with a mass of stones and soil, and the rampart extended correspondingly towards the north. Judging from the number of large stones lying in front of the wall, it seemed beyond doubt that about 2 feet of the top had been deliberately thrown over to help to fill in the old roadway. The foundation of the rampart will be noted on plan by a number of flat slabs laid towards the north. Here the rampart has been increased in width, and it seems likely that a bulge in the wall may have reference to its termination. The later entrance having been made nearly parallel to the original one, joins the old road, where it bends upwards towards the north-east. It will be seen that the same natural plateau on the slope of the hill towards the east would serve equally well for defensive purposes in guarding this gateway. The approximate line of the revetment to the west and north of the rampart is shown on plan, together with the old roadway which penetrates the revetment to the north, and joins the later roadway a few feet further in the same direction.

As might be expected, the relics recovered from the "fill-in" are few, and give us little or no information. They are as follows:—

Bronze.—A pin, which is square at one end, circular at the other, and split towards the point, measures $2\frac{9}{16}$ inches in length. A small rod measures $1\frac{1}{8}$ inch in length; a piece of waste metal and a small piece of indeterminate use.

Glass.—A segment of a small armlet of green translucent glass; on one side is a trail of white opaque enamel, which runs diagonally towards the mesial ridge. A small bead, $\frac{3}{16}$ inch in length and square in cross-section (fig. 22), of blue paste, and ornamented by a broad irregular line of white opaque enamel, in the centre of which is a thin line of red opaque enamel, was found in the 2 inches of soil which had been removed from the later roadway, just at the entrance.

Stone.—A hemispherical block of sandstone is roughly pointed at the base. Across the top, which is flattened, it measures about 8 inches by 7 inches, and it is $5\frac{1}{2}$ inches in height. On the upper surface a cup-shaped depression has been formed, measuring 4 inches in diameter and $\frac{1}{2}$ inch in depth. One whetstone, portions of four others, and about a quarter of what seems to have been a discoidal stone.

Moulds.—One fragment of a mould is too indefinite to be described.

Pottery.—The greater portion of the base and a small piece of the wall of a vessel of grey ware of Roman manufacture, and one fragment

of Samian ware, are the only two pieces of Roman pottery requiring mention. Several shards of native ware, of the usual coarse character, and a portion of the rim of a vessel of vesicular texture, and two other shards of the same material, complete the pottery from the rampart.

The Society must again proffer sincere thanks to the Right Hon. The Earl of Balfour for his kindness in permitting the excavations to continue, and for so generously handing over all the relics found to the National Museum. It must also mention its indebtedness to Mr Mark, the tenant of Traprain Law, for so kindly allowing the excavations to be carried on. To the Carnegie Trustees and to Mr John Bruce of Helensburgh hearty thanks must be given for their most generous donations, which enabled the work to be proceeded with during the past season. For assistance with the preparation of this report I must again express my gratitude to Dr George Macdonald, C.B., for kindly identifying the coins found, and to Mr J. Graham Callander, Director of the National Museum, for most valuable advice and assistance ungrudgingly given on many occasions.

III.

NOTES ON STUART JEWELLERY. BY ANDREW SHARP, F.S.A.Scot.

The jewellery of the Stuart period is of special interest, and perhaps none of it is so fascinating as the exquisite little rings, brooches, and clasps which were worn by the followers and adherents of the Stuart and Jacobite causes. The memorial jewellery, dating from the death of Charles I., is often of fine and rare design and workmanship, and the backs of the rings, brooches, etc., are beautifully enamelled in black and white and occasionally in colour. The fronts were mostly formed of a piece of rock-crystal cut in the shape of a rose diamond, and in special cases of a diamond itself, covering sometimes a miniature of the King, or his initials C. R., worked in gold wire surmounted by a crown and supported by cherubs. The actual jewellery given in memory of Charles I. is rare, but there are numerous rings and brooches of the type to be seen, almost alike in every detail, except that they contain various initials and devices showing that the fashion of wearing some article in memory of the Royal martyr was popular amongst his supporters. The devices of these pretty ornaments are many, symbolising various events in the lives of the people. In addition to initials there would be added cupids and flowers for a betrothal or wedding, and woven hair with initials and a skull and crossbones, or a skeleton

enamelled in gold or silver, for a death, all skilfully executed. Often there was a background of corded silk of some colour, possibly red, a minute examination of several examples showing that these faded backgrounds retained a body of colour sufficient to enable one to hazard an opinion as to the original hue. Behind the silk there would be a piece of cardboard, and one recently discovered specimen revealed a piece of a playing card, the King or Queen of Spades, as the printing on one side was quite distinct.

In the Londesborough collection is a memorial ring of Charles I. with a flat diamond and two smaller diamonds on each side; on the shank is an engraved skeleton, and a spade and pickaxe in black enamel at the feet. It has engraved within the initials C. R. January 30th, 1649, martyr.

In the British Museum, and fully described in their catalogue of finger-rings, No. 1365, is a ring said to be one of the "seven" mourning rings given at the burial of Charles I. This was sold at the Strawberry Hill sale in 1842. Another ring is described in the *Gentleman's Magazine* of July 1823 as belonging to the Gifford family; and in Hulbert's *History of Salop* is mention of a ring said to be one of those presented by Charles before his execution. All three rings have a portrait of the King, and in other features are very similar.

Another memorial ring is described in the *Gentleman's Magazine* of September 1823 as having belonged to a lady who died at Chelsea in 1809. The ring itself was of pure gold, and without ornament of any kind. On the top was an oval of white enamel not more than a $\frac{1}{2}$ inch long, and apparently about an $\frac{1}{8}$ inch thick. The surface was slightly convex, and divided into four compartments; in each was painted the four cardinal virtues, which, although so minute as to be scarcely perceptible to the clearest sight, by the application of a glass appeared perfectly distinct, each figure being well proportioned and having its appropriate attitude. By touching a secret spring the case opened and exposed to view a very beautiful miniature of the unfortunate Charles, with the pointed beard, mustachios, etc., as he is usually portrayed; from its resemblance to the portraits generally seen of the monarch it has every appearance of being a strong likeness. Within the lid of this little box (for box it was) were enamelled on a dark background a skull and crossbones.

In Lockhart's *Life of Scott*, it is stated that Sir Henry Halford gave Sir Walter a lock of Charles' hair when the remains of the King were discovered at Windsor in April 1813. Sir John Malcolm gave him some Indian coins to supply virgin gold for the setting of this relic, and for some years Sir Walter constantly wore the ring, which had "Remember" engraved on it.

Miss Gerard is in possession of a memorial gold ring, said to have been given by the King to Bishop Juxon on the morning of his death on the scaffold. This resembles those of the Henry VIII. period. It is described and engraved in the *Gentleman's Magazine* of October 1797. The bezel is hexagonal, with a Death's Head in white enamel on black ground, surrounded by the legend "Behold the End." At the back are the initials M. and L. tied with a mourning ribbon. Round the edge of this ring is engraved "Rather Death Than Fals Faith."

There is mention of another ring to be seen in the British Museum, and described in their catalogue, No. 1363, from the Braybrook collection. It appears to be of a somewhat unusual form, made as an oval box, richly enamelled in colours and containing a very fine portrait of Charles.

The mourning ring of Charles II. bore the inscription:—"Chs Rex Remem, obiit. . ber. 6 Feby 1685."

In the Waterton collection at the South Kensington Museum is a memorial gold ring with oval bezel set with crystal; beneath is a crown with the initials C. R. K. B. in gold over hair—Charles II. and Katherine of Braganza. It is English, and dated about 1685; diameter $\frac{2}{16}$ inch.

Probably the best proof that such memorial rings and other jewellery, as described, were actually worn, would be given by the study of Stuart and Jacobite portraits, where such jewels are sometimes seen among the ornaments.

I will now, by means of the lantern, illustrate more clearly a number of beautiful examples of Stuart jewellery which I have had the privilege of examining, at the same time describing them to the best of my ability.

Necklet and Ear-rings (fig. 1).—The necklet is formed of thirty-eight single rose diamonds, each set in a silver collet backed with a gold plate, with a distinctive toothed edge round each setting; the necklet graduates smaller to the ends. All the diamonds are of a pure white colour and well cut, in the form known as rose cutting. They have the appearance of being Indian or Golconda stones from their purity. As in most of the settings of this period, they are strung on thread, two parallel holes being bored at the base of each collet and a small cut steel bead being placed between to keep them separate. A curious feature about this necklet is a slight difference between the two sides, which leads one to think that they have been made at different times as bracelets. The toothed edging is finer in one half, and the colour of the gold differs, one being pale yellow and the other of a reddish tinge. I am inclined to think that they were made by different workmen, probably within a year or two, and later on, the owner wishing to make a necklet, had them joined up, at the same time using a beautiful clasp to make up the

centre. This small piece seems, from its pattern, to be of a slightly later date; and evidently this arrangement was meant to be temporary, as,



Fig. 1. Diamond Necklet and Ear-rings.

fortunately, the original bands at the back of the clasp have not been removed.

The pair of ear-rings are very interesting and graceful, and have

evidently been made at the same time as the first half of the necklet, which they match in the setting. There are seven diamonds in each—one large round centre, from which there are three pear-shaped drops, each suspended from a single smaller collet. In connection with this number of seven stones there is a curious coincidence. The constant use of seven diamonds or crystals has impressed itself upon me, as I have frequently had in my possession rings of the later Stuart period bearing this number of stones. Whether this was merely one of the fashions of the times or there was a special reason, I am unable to say, as I have found no documentary evidence on the point.

Necklace of Thirty-one Pieces.—This is a very rare and probably unique necklet (fig. 2), composed of thirty-one separate memorial miniature parts of cut crystals set in silver bezels, with the seventeenth-century toothed edge, the backs being of gold. The workmanship is very fine and the execution beautiful. Each piece has gold wire initials laid over woven hair, which in turn is surrounded by coiled designs of gold wire on top of a narrow margin—in the majority of them of blue enamel, others having a tinge of brown. Like other necklets of this period, these parts are strung on two lines of thread running through holes drilled horizontally at the backs. A very pleasing feature to be seen on the backs of them all are the initials engraved in the script seen in the very intricate but beautiful gold wire ciphers displayed in front. Owing to the small space used it is scarcely possible to decipher them. Altogether the origin or purpose of this necklet, or group of memorials, is difficult to ascertain. We are led to believe that it was to commemorate some band of Royalists, who may have suffered for their loyalty, as from the variety and number of initials they could scarcely have all been of one family. It is of interest at this point to make a comparison of the style of setting with the rose diamond necklet already described, and also of one which is of an earlier period, and noted in a famous collection of early Stuart relics, viz., the pearl necklet of Mary, Queen of Scots, in the possession of the Duke of Norfolk. All three necklets have one point in common, and that is the similarity of the toothed-edge setting below the bezel. It is quite distinctive of much of the Stuart jewellery, where the centres are stones or gems, and along with the beautifully rose-cut crystals form the principal feature of the jewellery used as memorials.

Ring No. 1.—(Belonging to Colonel le Rossignol.) A beautiful miniature portrait of Charles I. set under a large, flat triangular-shaped table diamond surmounted by a small diamond crown, is seen in this ring (fig. 3). The setting is of silver, rubbed smoothly over the edge of the diamond with an outer waved edge, and mounted on a gold ring with carved shoulders; inside the ring, at the back of the portrait, the initials



Fig. 2. Necklace with Memorial Medallions.

C. R. are engraved. The miniature itself is a fine piece of portrait painting, and exhibits the very high standard of art attained by miniature artists of the seventeenth century. The likeness is said to be excellent, if one may judge by comparing it with existing portraits of the King. Placed under such a rare and beautiful covering as the large flat diamond, doubtless cut and polished for the special purpose, this ring is a valuable and rare memento of the Sovereign whose reign and unhappy end is a distinctive epoch in English history.



Fig. 3. Ring with Miniature of Charles I.

Ring No. 2.—Another miniature ring which I might describe here (fig. 4) was lent to me by the owner, Miss Christie, Cowden Castle, and was in my possession about fifteen years ago. It shows a portrait of James, Duke of York, afterwards James II. of England, 1685-8, an exquisite piece of portrait painting, set in a circle of old Indian table diamonds with a cut-down silver edging, the dome-shaped gold back being delicately fluted; the band is a round gold wire evidently made for a very small finger. This is another illustration of the jeweller's craft allied to the art of the miniature portrait painter. This ring was shown to the late Mr Andrew Lang, who verified the genuineness of the subject, and expressed to the writer very considerable interest in it.

Also there is in the well-known miniature collection of the Duke of Buccleuch a fine portrait of the Duke of York by Samuel Cooper, dated about 1670 (the exact year not being stated), bearing a strong resemblance,

the only difference between this ring and the last being that in this portrait the Duke is represented wearing a suit of armour.

Ring No. 3.—(Period of Prince Charles Edward Stuart; ring belonging to Mrs Maxtone Graham.) This ring (fig. 5) is of great historic and local interest, and was made by Ebenezer Oliphant, an Edinburgh goldsmith, younger brother of the Laird of Gask. It commemorates the death by execution of four noblemen and twenty-one other supporters of Prince Charlie, who were captured after the failure of his attempt to regain the throne. It is made of fine gold, with an oblong-shaped shield and a white

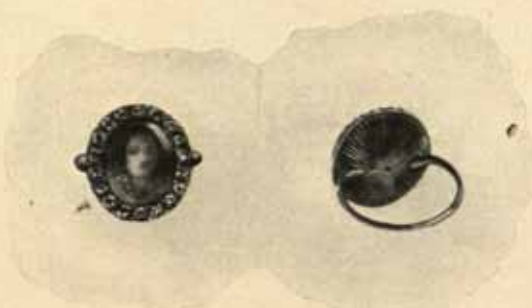


Fig. 4. Ring with Miniature of James VII.

enamel ground, on which are depicted in gold letters at each corner the initials of the four noblemen, surmounted by an earl's and baron's coronet carved in the gold. There are dates 1746 1747 1746
8th Dec. Apl. 9 Aug. 18, and in the centre 1746 above a representation of the executioner's axe. The shank of the ring is formed of two narrow bands entwined, with ground of white enamel, bearing initials and dates of twenty-one martyrs, and terminating on one side in an English rose and on the other in a Scottish thistle. As is well known, the names of the four noblemen are Earl of Kilmarnock, Lord Balmerino, Earl of Derwentwater, and Lord Lovat, the



Fig. 5. Ring with Initials.

dates of their execution being 18th August 1746, 8th December 1746, and 9th April 1747.

Ring No. 4.—(Belonging to Mrs Maxtone Graham.) This ring (fig. 6) contains a miniature of Prince Henry Stuart, brother of Charles Edward who became a cardinal; it is a beautiful portrait, set in a plain oval gold setting. It is placed within a round inlaid wood frame, and is lined inside with a groundwork of pale blue silk, the centre being a lozenge-shaped cushion on which the ring is embedded. There appear the initials H. R. on either side, a crown on top, and a wreath of roses and thistles below done in silver thread work, the whole showing evidence of amateur workmanship. One is led to speculate on the reason of the initials H. R. The first is Henry's, but whether the R. denotes the title of Rex we do not know, unless it was assumed after the death of Charles, when Henry might adopt the title of King in succession.

Ring No. 5.—(Belonging to Colonel le Rossignol.) This ring is of black enamel and gold set with a sard or red cornelian, on front of which is an intaglio portrait of Charles I. (fig. 7), and was probably meant to be used as a signet. On the other side of the stone, which turns on a swivel, there is engraved a floral pedestal or Hymenian altar

ornament surmounted by a Royal crown, on each side of which there are cherubs' heads. In the centre of the pedestal is the sun in full

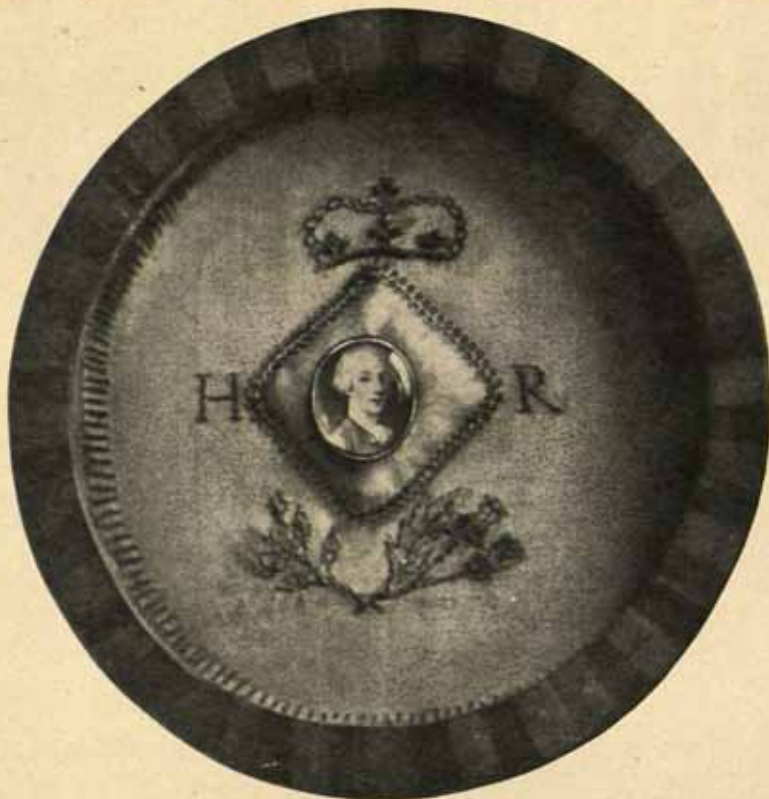


Fig. 6. Ring with Miniature of Cardinal York.



Fig. 7. Ring with Miniature of Charles I.

splendour. The gold setting has the usual serrated edge, but, in this case, is of black enamel with a row of panels round the straight bezel.

The hoop of the ring is most interesting and beautiful; it is composed of six oval loops enamelled on the sides and with a rose-cut diamond set in silver between each, giving it a dignified and charming effect. Of the many rings of the Stuart period I have examined, I feel strongly inclined to say that this is one of the most interesting. It is artistically designed and skilfully wrought, and its combination of intaglio engraving and enamelling shows it to have been the conception of a master craftsman, and, doubtless, made to adorn the finger of someone specially favoured by the King, who probably wore it in memory of him.

Ring No. 6.—Lozenge-shaped signet. This ring, which is of a later period than nearly all the rings already described, has a white crystal cut flat and engraved with a shield surmounted by a Royal crown. The shield has the quarterings of the Royal Arms, which, although small, can be distinguished—the lion rampant and the harp being quite noticeable; the initial M. is on one side of the shield and the initial R. on the other. Although it is merely a surmise, they might easily stand for Maria Regina; no other than Royalty would have the right to wear a Royal crown and the Royal Arms. The back is fluted according to the period of William and Mary, but the narrow split band is not interesting.

Ring No. 7.—This is an oblong flat table diamond with a baron's coronet in rose diamonds on top. Underneath is a groundwork of hair with the initial W. in gold wire. The setting is of silver, and its style shows a late period, probably that of William and Mary. The back is fluted gold work, and the band beautifully nurlled to match.

Ring No. 8.—This ruby and diamond ring is of a much earlier type than the last, and belongs probably to the first half of the seventeenth century. It has an oblong top, in which are set, within smooth gold edging, one flat cut table diamond and a ruby to match. The head of the ring is straight, sided with narrow panels of very delicate blue and white enamel carried all round. On the band of the ring the same ornament is displayed for half the distance, the back of the hoop being left plain.

Neck Slide No. 1.—Of the many slides which have passed through my hands, that shown in fig. 8 is a particularly fine specimen. It is made of fine gold with the usual toothed edge, which is rather less pointed, and one of the back wires is missing. The special feature is the beautifully embossed and modelled gold emblems under the faceted rose-cut pointed crystal coverings. Two cupids winged, with reversed outstretched arms and hands joined, form a bridge under which is a delicately formed cipher of finely beaded gold wire. The principal initial is the letter W. surrounded by curved scrolls. Above is a laurel wreath surmounted by a coronet. The modelling and execution of this

work has a very high artistic value, and is an object lesson to the modern craftsman. As is usual, these emblems are placed on hair—in this specimen there are two layers; the top is a square of very fine basket-pleating over a lozenge of straightly gummed hair of the



Fig. 8. Neck Slide with Coronet and Cipher.

same colour. Underneath both is a ground of spun material, probably linen dyed the same colour as the hair.

Neck Slide No. 2.—This exquisite example (fig. 9) is one of the very few that, to my knowledge, have probably an unbroken family history, and it is still in the possession of a descendant of the famous Scottish lady



Fig. 9. Margaret Keith's Neck Slide.

whose initials are shown beneath the rose-cut crystal. In outward appearance it follows the same conventional design of the other memorial slides, as it has the plain gold border with narrow toothed edging and the two bars at back. Internally, however, it has a character quite its own. The crystal is slightly higher, or thicker, than most of those that have been seen, which affords the lapidary more scope for cutting or faceting; and so exact has been the cutting, and so careful has been the choice of rock-crystal, that after

more than two centuries of handling and wear not a mark or scratch is shown. In this example the internal design shows a demi-skeleton upright between two cherubs seated at each end of a black and gold platform, which might represent a coffin, the group being finished in enamel of pale colour, all resting on a gold bar bearing in raised letters the inscription:—"Come ye blessed." Underneath are the initials in gold wire M K, the groundwork being of woven hair in a circle of gold wire with an outer border of white silk. The owner of this slide has kindly

supplied the following interesting details of its history. The initials M. K. are those of "Margaret Keith," born about 1580, a daughter of Sir William Keith of Ludquharn, married in 1608 to George Graeme, 4th of Inchbrakie. She was the mother of the renowned "Black Pate" (Patrick Graeme of Inchbrakie), the devoted follower and friend of Montrose. There are many interesting stories of the heroic conduct of Margaret Keith when left in charge of her husband's lands about the year 1646.

Neck Slides No. 3.—These form a pair of very fine "wedding slides" (fig. 10), identical in size and style, but in many features different from what is usually seen in this kind of ornament. Being very much thicker and heavier than is usually the case, they have a flat crystal top with



Fig. 10. Pair of "Wedding" Neck Slides.

faceted bevelled edge set in a smooth mount with points at intervals; below that is the finely toothed edge of the body of the ornament, which is entirely of silver gilt. The loops on the back, which hold the ribbon, are more ornate, and terminate in scrolls. There is something pleasing and romantic about these slides, and imagination could carry one a long way regarding their history. The beautiful designs beneath the crystals might supply the material to write it, but I must be content to give the descriptions as found.

The first shows a green enamel ground, on which, surrounded by a narrow border of red, is an ermine banner, tasselled and fringed with gold, with an oval shield of red with gold wire initials, probably L. M., surmounted by a Royal crown in the centre.

The second bears on a similar ground of green and red a red enamel heart-shaped centre with a gold thread cipher, too intricate to decipher, surmounted by a ducal crown upheld, on either side, by a cupid, each standing on a flat pedestal extended from a cherub's head underneath. So far as researches have gone, these are the only two slides that show

the fashion of the betrothal or wedding present exchanged between the contracting parties.

Neck Slide No. 4.—This is very different from the others, and in its way of an unusual type (fig. 11). It has a border of silver in which are set twelve small half oriental pearls, each in its own setting of rubbed-over edging, and between each pearl a small ridge; the outer edge shows the usual toothed ornament. The back is another example of the beautiful enamel work so frequently seen in ornaments of this period—indeed, in many cases that part is more beautiful than the front. The separate settings make an outer border of white, black, and blue colour, with an inner row of small acanthus leaves of white and red, leaving an oval centre delicately tinted with the three colours. Underneath the rose-cut crystal, on a blue ground partly covered



Fig. 11. Neck Slide Enamelled and Jewelled.

by a piece of pale olive satin, is a gold and enamel device of two entwined hearts, over which hover two flying cherubs holding a wreath or garland of blossoms, emblem of wedding bells.

Neck Slide No. 5.—This example is an oval pearl miniature (fig. 12).



Fig. 12. Neck Slide with Miniature.

This slide is so very similar in construction to the preceding one, that one might say it was made by the same hands; the sole difference being that it has the miniature of a young lady wearing the low-cut dress of the period with an edging of ermine. The portrait is probably that

of a young person deceased, as shown by the skull above the right shoulder. The pearl border and exquisite back are also similar to the one before this.

Neck Slide No. 6.—This is of oval shape, and we have the usual rose crystal and gold-toothed edge. Inside is a ground of light blue, over which is a square of plaited hair. Above is the usual device of gold cupids upholding a crown, and initials W. L. underneath. Surrounding the group at intervals are single blossoms or petals, no doubt signifying a marriage. One feature of this piece is the additional engraving of the initials on the back.

Neck Slide No. 7.—This is a heart pendant in gold with a rose-cut crystal, the usual toothed edge, and plain setting. Inside is woven hair within a heart-shaped wire, and two lively enamel cherubs balancing a crown over an intricate set of gold initials. This is something different in the way of a wedding gift, and the jewel is nicely proportioned.

Neck Slide No. 8.—In our National Museum of Antiquities is a neck slide of considerable historical interest. It is of the later period, and was probably made after 1715. In size it is small, but it has all the characteristics of the earlier slides, having the usual pointed edge—not so well defined, however—and the cut crystal cover. Beneath the crystal and resting on a square of plaited hair is a Royal (?) crown and J. R., encircled by the motto, "God Save the King."

Undoubtedly this is a relic of the Stuart Rising of that period, and the hair is that of The Pretender. This is the only Stuart ornament we have seen in connection with this member of the family, and, although not perfect, it is of more than usual interest.

Small Slide.—This has twelve small green pastes surrounding a rose-cut crystal set in smooth gold setting and, underneath, hair and the initials S. L. The principal feature is the back, which is of white enamel worked with red and black designs.

Oval Intaglio Pendant.—This is a very rare and beautifully cut gem, being a red sard stone engraved with classical figures, probably Bacchanal. The stone might be Early Italian, and it is mounted in a most lovely enamelled setting. The back, which is domed, is entirely covered with a white ground, on which are vine leaves and bunches of grapes. The centre is oval, and shows urns, etc. The outer edge or border shows a design of acanthus leaves, which is very effective.

Spray.—This is a spray of richly enamelled flowers. The uppermost flower is bright red tipped with green; the lowermost flower has a daisy formation in the centre, surrounded by petals set with emeralds, and bright red leaves alternately. The chief interest in this rare piece

lies in the middle flower, in the form of a pink rose delicately shaped and tinted, and containing a miniature portrait of Charles I., most exquisitely and faithfully painted. This ornament is quite in the style of the period when artists found their chief work and glory in these rich colours so carefully and beautifully blended. It is difficult to describe the amount of skill and labour displayed in a piece of this description. We would like to believe it was the work of English goldsmiths, and all the evidence points to its being done by English hands. It is problematic,



Fig. 13. Loyalty Badge of Silver.



Fig. 14. Loyalty Badge of Silver.

but it may be that this is one of the four or five such ornaments executed to the order of King Charles for presentation to his own particular friends, and in our knowledge the only one that has come to light.

Silver Loyalty Badge No. 1.—This pear-shaped silver pendant (fig. 13), with an urn and scroll ornament at top surmounted by the ring for attachment, is a very interesting and modestly made ornament; it is one of the best Stuart relics I have seen. Probably worn by a devoted Royalist, it has had bestowed on it very skilful workmanship in portraiture in the finely modelled head of the King. Wearing the usual vandyke beard and flowing locks, the likeness is easily recognised. When showing it to Mr H. Gamley, R.S.A., he informed me that it was an excellent piece of work, which might possibly have been done by a French

artist in this country. The features are well preserved and show little signs of wear, owing, no doubt, to its having been protected by the cover, which bears inside it the Royal crown and initials C. R.; when closed the locket is little more than $\frac{1}{8}$ inch thick.

Silver Loyalty Badges Nos. 2 and 3.—Other two silver portrait pendants are those of Charles I. and Queen Henrietta. They are interesting, but cannot be said to be of great merit. That of the King (fig. 14) is rude in construction, and has a border of beaded lines surrounding the portrait which is crowned, with a crowned C in front and a crowned R at the back. The pendant of the Queen is from every point a more artistic ornament. The sculpture work of the portrait is cleaner and more highly finished. The bust and drapery are well brought out, and the elaborate dressing of the hair shown to great advantage. The pendant is bordered by two lines of inverted twisted cords with rosettes at the four quarters, and the backs are finished plain. There are the usual loops and rings at the top of each pendant.

In closing this paper I wish to say there is no attempt to make it a history of the art of the seventeenth-century jeweller, but only a desire to bring to notice some interesting types of ornaments which were introduced after the death of Charles I., and are not to be found in any form after the close of that century, and a few others of later date associated with the Stuarts. The skill and resource of the craftsman are most admirable, and it is the want of leisure in a strenuous business life that prevents me pursuing this matter further. To the owners of the examples described I offer very sincere thanks for permitting me to illustrate them here—to Miss Christie of Cowden and Mrs Maxtone Graham, who have lent me interesting examples, and to Colonel le Rossignol, who has placed his unrivalled collection at my service; and they are to be congratulated on retaining in this country so many historical objects.

MONDAY, 9th April 1923.

THE RIGHT HON. LORD ABERCROMBY, LL.D.,
Vice-President, in the Chair.

A Ballot having been taken, the following were elected Fellows:—

WILLIAM SYDNEY CHARLES COPEMAN, B.A. (Cantab.), 76 Regent's Park Road, London, N.W. 1.

WALTER DICKSON, 103 Joppa Road, Portobello.

MATTHEW LAURIE GARRETT, 1 Wester Coates Gardens.

EDWARD J. INCHES, D.L., 88 Princes Street.

Rev. GEORGE LAMB, B.D., Beechwood, Melrose.

STEPHEN MITCHELL, of Gilkerscleugh, Abington, Lanarkshire.

WILLIAM JAMES SMITH, A.R.I.B.A., Lecturer on Architecture and Building, The Royal Technical College, Glasgow; 5 Rhannan Road, Cathcart, Glasgow.

Rev. S. GORDON F. WILSON, M.A., B.Litt.; A.K.C., F.R.Hist.S., Holy Trinity Vicarage, Gravesend, Kent.

The following Donations to the Museum were intimated, and thanks voted to the Donors:—

(1) By The Right Hon. THE EARL OF BALFOUR, K.G., through the Excavation Committee.

Objects recovered on Traprain Law during the Excavations in the summer of 1922. (See previous communication by James E. Cree, F.S.A.Scot.)

(2) By Miss J. C. C. MACDONALD, Ballintuim, Blairgowrie.
Leather Bottle, with nozzle and screwed stopper of horn.

It was also intimated that the following Donations had been made to the Library:—

(1) By W. DOUGLAS SIMPSON, M.A., F.S.A.Scot.

The Deeside Field. Edited by A. Macdonald and J. B. Philip. Aberdeen, 1922.

(2) By FRANK W. HAYCRAFT, F.S.A.Scot., the Compiler.

The Degrees and Hoods of the World's Universities and Colleges.

REPORT ON A BRONZE AGE GRAVE AT CAMELON. 243

(3) By GEORGE MACDONALD, C.B., F.B.A., LL.D., D.Litt., F.S.A.Scot.
The Romanization of Roman Britain. By F. Haverfield. Fourth
Edition. Oxford, 1923.

(4) By JAMES L. ANDERSON, F.S.A.Scot.

Burgess Ticket of Cupar, Fife, in name of James Lawson, Bailie in
Anstruther Easter, dated 5th July 1697.

The following Communications were read:—

I.

REPORT ON A BRONZE AGE GRAVE AND TWO OTHERS DIS-
COVERED LAST YEAR AT CAMELON, STIRLINGSHIRE. BY
MUNGO BUCHANAN, CORRESPONDING MEMBER. WITH A NOTE ON
THE RELICS FOUND. BY J. GRAHAM CALLANDER, F.S.A.Scot.,
DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES.

In the *Proceedings*, vol. lvi. p. 65, I described a Bronze Age short cist discovered, early in 1921, in line with Hamilton Street, Camelon, a short distance south of its junction with Brown Street (A on fig. 1). From the cist a few pieces of cremated human bones were recovered, but they were in such a fragmentary condition that it was impossible to define them further than that they were those of an adult. The only other relic found was a calcined flint scraper.

* I am glad to be able to report the discovery of three other graves in the vicinity during the past year.

On Saturday, 15th April 1922, a second short cist was unearthed, about 450 yards north-east of the first, at B on fig. 1, by workmen engaged in extending the tramway line in a sand-pit near Camelon Railway Station. The site of the burial is about 50 feet south of the station, the highest part of the ground hereabout. It was oriented north-north-east and south-south-west: the east wall was formed by one large single stone, and the west side was built in two courses by four stones to the same height: the north and south ends were also built in two courses of irregularly shaped stones, and the whole was covered by a large stone slab.

The interior measured 36 inches in length, 19 inches in width, and 18 inches in depth to the gravelly bottom, the cover stone projecting 9 inches on each side, and a little less at the south end. Round the margin of the cover stone on the same level there had been carefully placed large boulders, averaging 1 foot long, which made the covering

over 6 inches wider. Thus the covering stones extended 15 inches beyond the cavity of the cist.

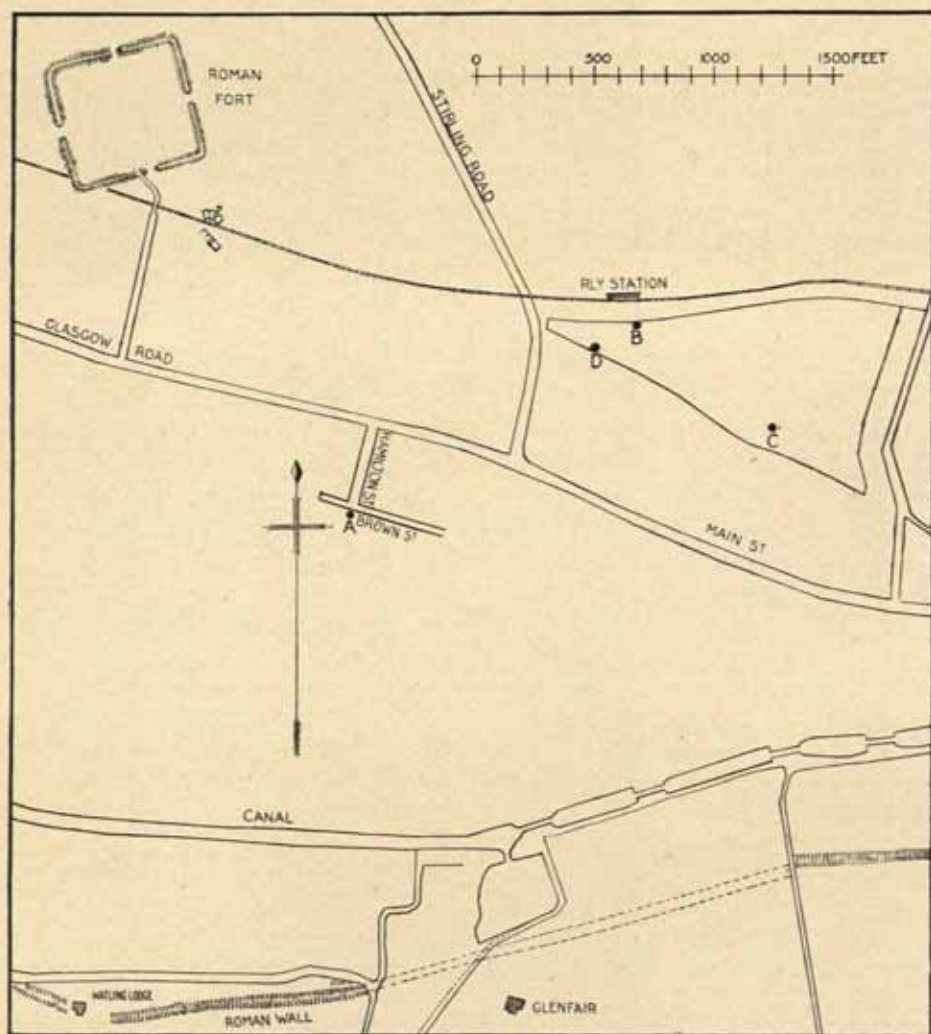


Fig. 1. Plan showing relative Positions of Burials, Roman Fort, and Antonine Wall at Camelon.

The depth from the surface to the top of the cover stone was 2 feet 6 inches, and to the bottom of the cist, altogether, about 4 feet 6 inches. Mr M'Kenzie, lessee of the ground from the North British Railway Co., immediately realising the necessity of a careful search, stopped the

workmen, and summoned me for advice. I went out to the site immediately with him, but, as it was getting dark, I only made a few suggestions for its clearing, so that we might commence on Monday morning. This was begun early on Monday. Mr M'Kenzie took from the grave near the south-east corner a beautiful ornamented urn of the food-vessel type (fig. 2), and a large piece of a human skull.

The whole of the sand which had fallen into the interior was cautiously put through a fine sieve, and a fair quantity of small bones was got amongst it, with several large pieces of the skull and a considerable part of another bone, but no implements of stone or metal were found. Certain of the bones did not appear to have been cremated, for parts of the skull were found at the south end, the ribs in the centre, and the large bone at the north end, as we would expect after inhumation rather than cremation.

The human remains were submitted to Professor Thomas H. Bryce, F.R.S., F.S.A.Scot., who reported, "the deposit in this case consists of both burnt and unburnt bones. The burnt bones probably represent the skeleton of a single individual, as no duplicate fragments can be detected. The bones are much comminuted. The recognisable fragments include a number of phalanges both of hand and foot, and as there is no trace on any of them of an epiphyseal line, it can be concluded that the individual was of full adult age. Some of the finger bones are entire; they are well shaped and somewhat delicate, suggesting the possibility that they belonged to a female hand, or to that of a male of slight build. A portion of the ramus of the mandible confirms this judgment.

"The unburnt skeleton is unfortunately very imperfect and fragmentary. It has not been possible to make any reconstruction of the skull. The largest fragment represented the greater part of the frontal bone. The lower part of the tabular portion is flat and vertical, suggesting that the individual was a woman. The frontal sinuses, which are laid open, are of small dimensions, indicating that the person was not far advanced in life. The upper and lower jaws are broken and parts are missing, but the teeth have nearly all been recovered. They show neither wear nor any caries. None of the wisdom teeth have erupted, and their fangs have not been fully formed. The rest of the skeleton is represented by a few broken vertebræ and some broken long bones, but no one of them is entire. They are all of slender proportions, but the ossification is complete in every case. This fact, along with the small size of the bones, the character of the frontal bone, and the incomplete dentition, indicate that the individual was in all probability a female over eighteen or twenty, but not fully adult."

A few days later I was summoned to examine another stone cist which had been discovered in the same field, about 220 yards south-east of the last, at C on fig. 1. The sand had been removed to a depth of 10 feet or so, leaving a sloping bank, which had caused the east wall of the cist to give way, the cover stone at the south end falling into the interior on the west side. Here, as in the above cist, the walls were built of large boulders. Stones suitable for building such cists seem to have been scarce in the locality, there being no rock in the neighbourhood, and those utilised must have been brought from a distance.

The interior of the cist measured 4 feet in length, 18 inches in width, and 2 feet in depth, the distance from the surface of the ground to the bottom of the grave being 4 feet. The main axis lay north-west and south-east. The walls were built all round in two courses of large stones, mostly boulders, and the cover was in three pieces, the whole just over 4 feet in length. The top stone that covers the south portion was 3 inches thick, the mid-stone $1\frac{1}{4}$ inch in thickness, while the third stone was barely 1 inch. This was a rudely constructed cist, but it was uncommonly long. Perhaps this was necessary owing to the method of burial, for the bones it contained have been traced the whole length of the interior. The head appears to have been at the south end, the other bones being in the centre and north end, the whole having the appearance as if the body had been placed on its side, close to the west wall. Near what was considered the head were found several pieces of an iron sword, very much corroded, with little of the metal remaining.

Professor Bryce, to whom the bones from this cist were also submitted, stated, "the bones from this cist have no tale to tell. There are only a few fragments of long bones, from which no conclusion can be drawn. They are much stouter in build than those in the first cist."

In the month of December a further discovery was made in the same sand-pit, about 260 yards west-north-west of the last described at D on fig. 1. It consisted of a wheel-turned vessel of dark-coloured pottery, with a number of objects made out of thin sheet bronze or brass, and some much corroded fragments of iron and particles of wood. The vessel was found standing on its base at a depth of 2 feet below the surface of the ground in stratified sand, the objects of bronze were arranged in a curve a few inches to the east of the pot, and the fragments of iron and wood a few inches farther away. There was no structure surrounding the deposit and no evidence of human remains, but the sand above the objects had been disturbed and was mixed with dark soil.

NOTE ON THE RELICS FOUND. By J. GRAHAM CALLANDER.

Like the grave discovered the previous year, the first brought to light in 1922 was structurally a typical short cist of the Bronze Age; this was confirmed by the presence of the food-vessel (fig. 2) which it contained. The urn is of a common variety of this class of pottery, both as regards form and the texture of the ware, but in its ornamentation it shows the very unusual feature of impressed curvilinear lines. It is very seldom indeed that curved lines are seen in the ornamentation of Scottish Bronze Age pottery.

The vessel, which is formed of buff-coloured ware, measures $5\frac{1}{4}$ inches in height, $6\frac{1}{4}$ inches in external diameter at the mouth, $6\frac{1}{2}$ inches at the shoulder, and $2\frac{3}{4}$ inches at the base, the wall being $\frac{11}{16}$ inch thick. The upper part of the vessel is almost vertical, with a slight concavity between the shoulder and the lip, the lower part tapers rapidly to the base, and the top of the rim is bevelled downwards towards the interior. The wall and the top of the rim are covered with ornamentation. Between the shoulder and the lip the vessel is encircled with a row of small arches or loops impinging at the sides, and a broad band of straight upright lines, separated by a single transverse line and bordered with two lines above and below. The tapering lower portion is encircled by three bands of ornamentation, separated from each other and bordered above by transverse lines, the central band consisting of short vertical straight lines and the two others of a row of small arches or loops similar to those on the upper part of the vessel. The edge of the lip is decorated with short cuts or notches, and the bevelled top by short radial lines between a marginal line on the outside and on the inside. All the ornamental designs, with the exception of the cuts on the edge of the lip, have been formed by pressing a twisted cord on the clay before the vessel was fired.



Fig. 2. Food-vessel from Camelon.

From Professor Bryce's report on the bones found in this grave, it will have been noticed that two individuals had been buried in it, one of

them having been cremated. This combination of burials by inhumation and after cremation in the same grave is worthy of notice, as also the presence of a food-vessel urn with incinerated bones. This latter circumstance is not common, as generally in Scotland food-vessel urns are found with inhumed burials. Still, a few reliable records of the occurrence of this class of pottery with cremated human remains have been published.

This grave belongs to the early part of the Bronze Age, but the next two date to a considerably later period—the time of the Roman occupation of the south of Scotland.

The first of these later deposits consisted of a rudely formed stone grave, rather longer than the short cist of the earlier period, and it contained the unburnt remains of a human skeleton with the much decayed remains of an iron sword (fig. 3). Only the tang and the upper part of the blade survive, the total length being 9 inches, of which the tang accounts for 4 inches; the blade is flat and $2\frac{1}{2}$ inches in breadth. At the root of the tang are the remains of a thin flat plate of bronze, which has separated the hilt from the blade, and the top of the tang has been riveted. There are indications in the mass of rust adhering to the tang that the grip had been of wood. The breadth of the blade of the sword is such as to indicate that probably the weapon had been a *gladius* of the Roman legionary and not the sword of a native Caledonian; the native swords found at Newstead have much narrower blades. The



Fig. 3. Fragment of Iron Sword from Camelon.

grave having been found within 600 yards of the Roman camp at Camelon, it is quite likely that it is that of a Roman soldier.

The occurrence of a sword in a Roman grave in Britain seems to be very unusual; I have not been able to learn of any such discovery in these islands.

The relics from the last-discovered deposit consisted of a wheel-turned vessel of pottery, three discs and two other small fragments of thin sheet bronze or brass, and several pieces of much corroded and contorted iron. Although there were no indications of a coffin and no traces of human remains, it may be that the deposit was sepulchral.

The vessel (fig. 4) is of hard ware formed of well-washed clay. Black on the exterior, it becomes lighter in colour towards the inside, which is grey. The pot, which measures $4\frac{1}{2}$ inches in height, $3\frac{1}{2}$ inches in diameter at the mouth, $5\frac{1}{2}$ inches at the shoulder, and $2\frac{1}{2}$ inches across the base, has an ovoid body flattened on the top and set on a pedestal foot, the mouth having a short upright brim concave on the outside. At the junction of the body and brim and round the foot is a slight groove. Part of one side of the vessel was broken in by the pick of the workman who discovered it, and the fragments so dislodged were not preserved. With its high shoulder and flattened top, I have not been able to find



Fig. 4. Urn of dark-coloured Pottery from Camelon.

an exact parallel figured in any of the books dealing with this class of pottery. Mr Thomas May, F.S.A.Scot., considers that the vessel belongs to the Agricolean period.

Of the three bronze discs (fig. 5), two are nearly complete and one is crushed out of shape. They measure $2\frac{1}{2}$ inches in diameter, and have a hollow boss in the centre $1\frac{1}{2}$ inch across. In the flat edge between the central boss and the periphery are three small rivet holes placed not quite equidistant. The two other fragments of bronze are incomplete and too much broken to allow of their purpose being determined.

After some of the rust from the iron fragments had been cleaned off, these were seen to be the remains of two hinges. They were of the kind in which the loop on one side passed through a perforation at the end of the complementary part, and not of the variety which work on a transverse pin. The best preserved hinge showed a length of about

3 inches of one limb, but it had been longer; its breadth was $\frac{7}{8}$ inch. Portions of three rivets remained in position, with fragments of wood impregnated with iron still adhering to them. Evidently there had



Fig. 5. Bronze Disc from Camelon. (1.)

been a wooden box or coffer deposited with the pottery vessel, which had decayed away with the exception of the parts just described. Possibly the bronze discs and the other pieces of this metal may have served as mountings for the box; but this is uncertain, as the discoverer stated that they were found placed on edge on one side of, and concentrically with, the urn.

II.

CELTIC PLACE-NAMES IN ORKNEY. By HUGH MARWICK, F.S.A.Scot.

This is a subject which has, so far, received scant attention from professional philologists. In his highly interesting book, *Scottish Land Names*, Sir Herbert Maxwell says (p. 79): "All the names in Orkney and Shetland which are not English are in Old Norse." Mr Johnston, in his *Place Names of Scotland*, comes to practically the same conclusion. Isaac Taylor, in his *Words and Places*, p. 113, says of the Orkneys: "In all the sixty-seven islands there are only two, or perhaps three, Celtic names." The only previous investigators of any consequence had been Captain Thomas, R.N., and Professor P. A. Munch, and it was probably on the results of these gentlemen's work that Sir Herbert Maxwell and Mr Johnston based their conclusions.

With regard to Shetland, the case is very different. In his *Shetland-søerne Stednavne*, the late Dr Jakobsen has given us a study of Shetland place-names which, for combined precision, exhaustiveness, and scholarship, surpasses every other work on British topographical nomenclature. One chapter is devoted to place-names of Celtic origin, and the number of Celtic words that he found still survived is quite surprising. In the present article the writer hopes to show that in Orkney also, in spite of the lapse of over a thousand years and the total extinction of the Celtic vernacular, a considerable number of the old place-names still survive, corrupted indeed at times, but often preserving their old Celtic form unchanged.

Before dealing with the names themselves, let us consider briefly the circumstances under which, and the time at which, these borrowings could have taken place. On these points there is a considerable diversity of opinion. The extreme view—that when the Norsemen first came over they found the isles uninhabited (save perhaps for a few Christian anchorites)—need not detain us long. The supposed absence of Celtic place-names was the chief argument in favour of this view, and the existence of the appended names is sufficient to rebut that. Until recently, however, the current idea (even yet common) was that the coming of the Norsemen was cataclysmic, a wave sweeping before it every vestige of the former inhabitants and their culture. The more recent and reasonable view is that for a couple of centuries before the great Viking age—i.e., roughly speaking, prior to A.D. 800—intercourse had been taking place between Scandinavia and these northern isles, and that Norsemen had gradually secured a footing, and made settle-

ments, both in Orkney and Shetland. It would be difficult indeed to explain the adoption of these loan-words otherwise.

Professor Alexander Bugge¹ employs four converging lines of argument in favour of this view.

1. He first quotes Zimmer's opinion that the ravaging of Tory Island in A.D. 617 was due to Scandian sea-rovers. Dr G. Henderson,² however, shows that it is not necessary to assume this, seeing that the Picts of Albion were not innocent of such pastimes themselves. The same view is taken by Professor W. J. Watson, who, in a recent paper—reported in the *Inverness Courier*—argues that Orkney was the earliest headquarters of the Picts in this country, and that they were notorious freebooters both by land and sea. *Murchobhlach muiridhe*, a "marine fleet," is the phrase used in the *Annals of the Four Masters* for the spoilers of Tory Island, and *pioraiti na fairgi*, "pirates of the ocean," is the phrase used in *Gorman's Martyrology* for the ravagers of Eigg in the same year. One would suppose that the Picts and their homeland would be well enough known, and it is possible that the phrases used point rather to strangers whose homeland was unknown—"over sea."

2. Jakobsen's research into Shetland place-names proved the existence in considerable abundance of place-names there which were obsolete, or nearly so, at the Viking period. Such names as O.N. *vin*, pasture, *bólstaðr*, homestead, and *heimr*, homestead, are practically unknown in Iceland (which was settled in the end of the ninth century) but are common in Shetland and Orkney.

3. From Celtic decoration on stones in the island of Gothland it appears certain that intercourse had taken place at a very early period with the Celts of Britain, and the nearest point of contact was of course these northern isles.

4. Lastly, Bugge shows that odal right was not spoken of in Iceland, but Torf Einar took their odal rights from the Orkney settlers, in return for his payment of the fine imposed on the islands by King Harold Hárfagr, as *mannbót* for the slaughter of his son Hálfðan. Hence, Bugge concludes that at that time Orkney had been so long settled that the settlers had had time to acquire odal rights (probably five generations). In that case the date of settlement would be put back to about the middle of the seventh century, if not earlier.

It is thus probable that the Norsemen had been living in touch with the earlier inhabitants for a long time before the great Viking age.

¹ *Vesterlandenes Indflydelse paa Nordboernes og særlig Nordmaendenes ydre Kultur, levestaet og samfundsforhold i Vikingetiden.* Kristiania, 1905.

² *Norse Influence on Celtic Scotland.* 1910.

The Viking incursions, which began towards the end of the eighth century, were due to various causes, into which we need not enter here. The point to be emphasised, however, is that it is quite improper to conclude that even then did a complete extirpation of the natives take place in Orkney. Even these terrible Vikings must have been fully alive to the market value of the natives as slaves, and the women-folk, at least, must have been regarded as desirable property. In the *Laxdale Saga* is told the story of an Irish slave Melkorka and her little son—one of the most moving episodes in literature—and saga references to Celtic slaves are too numerous to mention.

The influence of the Norsemen on the Celts has been sketched by the late Dr Henderson, and the reciprocal influence of the Celts on the Norsemen has been very fully discussed by Professor A. Bugge (see above). Among other things, the latter refers to Celtic words still in use in Faeroe. Some of these, together with others, are represented in the Orkney dialect of to-day; but here it will be sufficient to refer only to the traces of Celtic preserved in the place-names.

For many years before his most regrettable death, Dr Jakobsen had been making a careful study of this subject. In a conversation I had with him during, I think, his last visit to Orkney, I asked him what proportion of the Orkney place-names were of Celtic origin. "One per cent.?" I asked tentatively. "Oh, much more than that," he replied; "I should think probably from five to ten per cent." This I feel sure was an exaggerated estimate; but of course there was no one better able to express an opinion.

Only harm can be done by a rash ascription to Celtic origin of words which are difficult of interpretation otherwise. Seeing that the vast majority of Orkney names are of Norse origin, it is always safer when a word may, with equal probability, be interpreted either as Celtic or Norse, to prefer the latter origin. Take Grory (*gróri*) as an example. This name occurs twice, once in Eynhallow and again in the Holm of Sockness, in each case as the name of a low pebbly point—the marked characteristic in each case being the mass of clean, light-coloured pebbles thrown up by the sea. I mentioned the name to Dr Jakobsen, and as he could not think of a Norse origin we looked up Spurrell's Welsh Dictionary. There we found *gro*, "pebbles, ridge of pebbles thrown up by the sea." This seemed extraordinarily appropriate. Recently, however, in thinking over this word and its unexplained termination, it occurred to me that it was a combination of Norse *grá*, grey, and *eyrr* (in dative, *eyri*), a gravelly beach. Hence, I prefer to regard the name as Norse; though, on the other hand, Professor Magnus Olsen of Christiania in a recent letter to me notes: "It seems to me a little

strange that *-eyrr* in two places should be combined with the adjective *grár*, which is not very common in place-names."

Another difficulty arises with Hoy names. There we find several *glens*, and there are little lochs among the hills marked *lochans* on the map. It is very hard to decide whether these are ancient names or names applied more recently by map-makers or others. Consequently, though it is necessary to refer to them, I do not feel confident in regarding them as ancient borrowings.

One further point must be mentioned. It is generally acknowledged that the pre-Norse inhabitants of Orkney were Picts. Our almost total ignorance of the Pictish language makes it very difficult to decide to which branch of the Celtic race they belonged, even if we do not go so far as Rhys and deny them Celtic origin altogether. Most authorities regard them as having been in closer affinity with the Cymric than the Gaelic branch, but until more facts are at the disposal of scholars a final decision is impossible. Some of the names cited below may perhaps shed a little light on the nature of their language. It may seem staggering to some to find Cymric, Gaelic, and Irish words occurring side by side in Orkney. But Jakobsen found the same thing in Shetland, and we must accept the facts as we find them and make our theories suit them and not *vice versa*. My own knowledge of Celtic being very slight, I shall merely suggest derivations that seem obvious, and as far as possible make comparisons with similar forms occurring elsewhere.

(For convenience in comparison, the system of phonetics employed below is that used by Dr Jakobsen in his various works on Shetland.)

Gael. *àirigh*, hill pasture, shieling. This word is found in three places at least: in Stronsay where we have the farm of Airy (*éri*), in Birsay where there is a farm of the same name near Greeny Hill, and in Sanday where there was a farm of this name now extinct. (See Mr J. S. Clouston's *Records of the Earldom of Orkney*, p. 206.) In Sanday also, on the farm of Warsetter, there is a field Airafea (*éræfi*) situated on an elevation almost the highest in the island. The farm of Airy (spelt Arie in the *Uthel Book*) must have been near here if not actually on this field. In Stronsay, Airafea is a name applied to an extent of hilly ground. These names seem to contain the same root; the *-fea* part is of course the usual Orkney termination meaning hill (O.N. *fjall*). The Early Irish form of the word was *airge*, and we know from the *Orkneyinga Saga* that the Norsemen understood and used this term as a place-name, *Ásgríms-erg*. (See *Rolls O. Saga*, p. 216.) In Joseph Anderson's edition of the *Saga* we find (p. 187) this name identified with the present Askary. In the *Flatay Book* text of the *Saga* the form is different—*Ásgríms-ærgin*. Anderson, followed by Jakobsen in *Shetlandsøerne Stednavne*,

regarded *ærgin* as the Gaelic plural *airidhean*; but Professor Watson informs me that this is a modern form and hence the suggested explanation fails. In the latest edition of the *Saga* by S. Nordal (Copenhagen, 1913-6) it is suggested that the word is a neuter plural with the suffixed article *-in*. That is more probable, but whatever the explanation, it seems certain that this is the name we find applied to a farm near Stromness—Ayrean (*æriæn*), and again to a place in the Woodwick hills. (For the phonetics cf. *Burrian infra*.)

Blan. This word is applied to a hill in Shetland, and Jakobsen refers it to the Welsh *blaen*, a point, extremity, end, top, etc. In Stronsay there is a *Blan* (*blān*) Loch, a tiny loch with a hillock rising beside it. This is possibly the same word. In S. Ronaldsay there is also a farm *Blansetter* on the slope of a small hill above St Margaret's Hope, but that, I think, must be regarded as the *saeter* (O.N. *sætr*, pasture, etc.) of *Blan*. A man of this name figures in the *Ork. Saga*. Nevertheless, as the farm appears in the 1502 rental as *Blanksetter*, we may have here another origin altogether.

Burrian. Jakobsen derives this word as used in Shetland from the Irish *boireann*, cliff, rocky coast, and says that the fact of its always being applied to cliffs or "stacks" in the sea shows it can have nothing to do with O.N. *borg*. In Orkney, however, the word occurs several times—in N. Ronaldsay, Rousay, Sanday, and Harray—and in each case is applied to the site of a broch. Thus, in Orkney at least, there is no doubt that it is simply the O.N. *borg* + *in* (the def. suffixed article). This word is cited by Jakobsen once from Shetland, but there it is pronounced *burgen* (*börgən*). This is rather odd, for we find the Orkney pronunciation reproduced in the *Hildina-ballad* from Foula which Low took down phonetically. There the original *glas borgin* (glass castle) has been modified to the form represented by Low's *glass buryon*.

Brae. Gael. *bràighe*, upper part (of places), Scots *brae*. This appears in the name *Brae-an-finyan* (*bré:ən:ffinjən*)—a steep *brae* on the farm of Faraclett in Rousay. The structure of the word is characteristically Gaelic—the chief accented qualifying syllable coming last. What *-finyan* means is very doubtful. Although the foot of the *brae* is very marshy, we can hardly think of the Welsh *ffynnon*, well, spring, as that word seems to be regarded as a borrowing from Latin.

Gael. *ceall*, a church. In Sanday an old site goes by the name of the Kirk an' Kill o' Howe (*kil*). Here, there are two slight hillocks—about 100 yards apart. The westernmost summit is called the Kirk, and the eastern one the Kill, but they are generally referred to conjointly as the Kirk an' Kill o' Howe. Though there is no trace of building now on either spot, the whole field being cultivated land, one suspects from

the curious combination that here we have indications of an earlier and a later church. I imagine that the Kill has been the site of a Celtic church, and, after that fell into decay, a later Kirk, in Norse times, was built in close proximity.

The same word may, I think, with certainty be found in Kili (Kili) Holm, a small island lying at the north end of Egilsay. The O.N. *Kill* means a long narrow inlet, or passage of water, as we find in the Kyles of Bute. Here the word is quite inapplicable. Furthermore, we must note that in his description of Orkney, written in 1633, Robert Monteith of Egilsay and Gairsay gives the name of this island as Ridholme. As he was the owner, it is hardly possible that he was making a mistake about the name, although to-day it is quite unknown. The north point of the island, however, is called the Point of Ridden (*ridn*), and this I fancy is the same word. The full significance of the name Kili can only be realised, however, when we consider it in relation to the name Egilsay later.

Can-. Several names containing this prefix may be cited, but whether all are to be referred to the Gael. *ceann*, head, is doubtful. There are Cannigil (*kánigəl*), a farm near Scapa; Canniesle (*kánisəl*), a point just below the church in Holm; Cannamesurdy (*kánəmesórdi*), a well on the beach in Frotoft, Rousay; Cantick (*kántək*) Head, the eastern point of Walls that juts out into the Pentland Firth; the Glen of Kinnaird, in Hoy, a valley among the hills; and Stours Kinnora, cliffs on the west side of Hoy. I take these last two names from the Survey map and have not been able to ascertain the local pronunciation. In Cantick, the accent being on the *can-* shows that to be the qualifying part. Mr A. W. Johnston, Editor of the Viking Club's *Miscellany*, etc., in a letter to me suggests that this is Gael. *ceadha-an-t-suic*, the point of a plough on which the share fits. *Ceadha* is also used of a quay or pier jutting out into the sea. This seems phonetically suitable, but is somewhat too ingeniously metaphorical. But, in any case, there seems no doubt of Celtic origin.

Gael. *cnoc*, a hill; dimin. *cnocan*. The latter word certainly appears in Nockan (*nókən*), the name of a fishing mark east of N. Ronaldsay. Knucker Hill (*nókər*) in Westray is, Jakobsen thought, the same word. In Faeroe, *knokkur*, m., is used for the head, especially the crown or back of the head. Furthermore, Knokkur or á Knokki is the name of a fishing mark also in Faeroe, while another bears the plural form Knokkarnir. Bugge regards these as certainly of Celtic origin, and, as Jakobsen says that the word does not occur elsewhere in Norse, either as a generic or a place-name, there seems no doubt on the point. It is interesting to note the termination -r, Faer. *Knokkur*,

Shet. *Knokkers* Knowe, Ork. *Knucker* Hill. Jakobsen thought it a modification of the Celtic diminutive ending *-an*, and compared the change sometimes of *boireann* to *borrier*. On the slope of Knucker Hill is the farm of Knugdale (nóg:del). Here again the *cnoc* appears. In Rousay there is a high hill called Knitchen (nít/ən, knít/ən). Not far down from the summit is a fairly big loch called the Loch o' Knitchen. This I think shows a double transference. The Norse have found the hill termed Cnoc; they have adopted the name and called the loch Cnoc-tjörn, the *cnoc*-tarn—which name in time has been transferred back to the hill itself. The O.N. *tjörn* regularly becomes *-shun* or *-chun* (fən or t/ən) in Orkney.

Gael. *corc*, Ir. *coirce*, M. Ir. *corca*, Welsh *ceirch*, oats. There are many places in Orkney having the prefix *cork-* or *curk-*, e.g. Corcaquina, Curquoy, Curkland, Curkabreck, Curcum, etc. Most of these names are certainly to be derived from O.N. *kirkja*, church; but I have always thought it strange that, while we have names preserving the old Norse word for barley, we have apparently no word meaning oat-land. It is almost certain that the Norse must have adopted that cereal from the Celts, whether they borrowed the name or not. I am thus inclined to suspect that some of these *cork-* names represent the old Celtic name for oats.

Diamonds. This is one of the most interesting names in the island group. Jakobsen says that in Faeroe are two high rocky islands—Stóra and Lítla Dímun; in Broadfirth, Iceland, there is Dímun, an island with twin hills, and Dímunarklakkar, two tall rocks in the sea; in Rangaavolde, Iceland, two hills, Stóra Dímun and Lítla Dímun. He does not refer to the name in Norway, but in Rygh's *Norske Gaardnavne* (Romsdal's Amt) we find Dimmen indre og ytre (pronounced Dímnā), "doubtless the proper name of the island now called Dimmø. The island has two hills separated by a deep hollow." In Shetland, the name Dimons (dímnēs) occurs twice. Everywhere the word occurs there is a suggestion of a group of two—two islands, two peaks, two rocks, and Norse philologists seem agreed that it is a Celtic word. Joyce (*Irish Names of Places*, vol. ii. p. 247) shows that the numeral two was a favourite in Irish place-names. Jakobsen suggests the Irish *di-muinn*, two tops, two heads. It may, however, be *da*, or rather *de* + *monadh*, two hills or elevations. But whatever be the precise origin, the usages make it clear that it is a word implying twin elevations of some sort. In Orkney there is a house in Deerness called now Diamonds—pronounced as the English word; but Jakobsen made a special trip there to see the place, and great was his delight to discover again the two hillocks near the house that had given rise to the name.

There is a small island lying in the Bay of Firth called now Damsay. The Saga name is *Damisey* or *Daminsey*. Professor Munch regarded this as a Celtic name, and suggested that it might perhaps have been named after St Adamnan. His mere suggestion has been generally adopted as the true origin. More recently, however, Mr A. W. Johnston in a letter to the *Scotsman*, dated 2nd July 1921, associates it with the name of an island in Lough Erne in Ireland—spelt in the eleventh century as *Daiminis*, i.e. *Bovis insula*, or ox-island. This is by no means improbable; but we have to note that here again in the Bay of Firth, lying close together, are *two* small islands—the one called Damsay and the other merely the Holm of Grimbuster (from the township on the adjacent mainland). I would suggest, then, that the Norse found the name, represented in the examples cited above, applied here to the two islands, and, not understanding the meaning of the word, applied it to one only—the larger. And in slight confirmation of this we can point to the fact that the other has no *independent* name of its own, but is simply the Holm of Grimbuster. It is also noteworthy that the final *-s* appears in the Shetland form, the Deerness form, and the Saga form. In any case, it is in the highest degree improbable that the name has any connection with Adamnan.

In this connection, I have seen no reference made to Ptolemy's *Dumna* which Captain Thomas identified with Foula. I think it highly probable that this name also should be associated with the various forms cited above.

Aise, etc. Between Kirkwall and Scapa there is the Burn of Aisedale (ēz-, ēs-); in Sandwick, part of the Burn of Hourston appears as the Burn of Ess; in Rousay, there is a spring on the beach below Langskail known as the Well o' Ease (īz, īs). With these names cf. Esthwaite Water and Easedale in the Lake District, Easdale near Oban, the Ise River near Wellingborough, Easeburn in Yorkshire, etc. In all of these Isaac Taylor thought there was to be found the Celtic word for water—Gael. *uisge*, Welsh *wysg*, a current. These two roots, however, are not cognate, as the Welsh *wy* regularly corresponds to the Gael. *ia*. Nor is it probable that in either do we see the origin of the above names. Nor can the Gael. *eas*, a waterfall, be accepted, for, while there are indeed some small falls on the Burn of Aisedale, there is nothing in the other two cases to which *eas* could refer. Nevertheless, as no Norse origin can be suggested, and as similar forms are so numerous, both in this country and on the Continent, we must conclude that they have their origin in some Celtic root—living or obsolete.

In Harray, there is also a valley Eskadale which is obviously derived from a burn **Esk-á*, where the suffix represents the O.N. *á*, a river or

burn. The *Esk*-, however, is probably not the Celtic word but the O.N. *askr*, ash-tree, which appears also in Eskadal in Norway.

Gael. *achadh*, a field, plain. This seems to appear in the name of a loch in Burray—Echnaloch (ἀέχνη:λόχ). This loch is separated by a narrow strip of land from a bay which bears the name Echnaloch Bay. A difficulty arises from the position of the stress. If it means Field-loch, one would expect the order of the words to be reversed; if it means Loch-field, the stress should be on -loch. It is just possible that, as loch is a well-known generic term in Orkney, the Echna- has come to be regarded as the descriptive part and attracted the stress.

Egilsay. Probably more has been written on this than on any other Orkney place-name. Munch lent the weight of his great authority to the Celtic side—deriving it from the Greek word for church, which passed into Old Irish as *eclais*, Welsh *eglwys*, and Gael. *eaglais*. No doubt the presence of the famous old church lent much credibility to this origin, but the actual occurrence of another Egilsay in Shetland without any old church (so far as I know) makes one suspicious and disposed to regard the name in both cases as O.N. *Egils-ey*—Egil's island. Jakobsen was uncertain, but inclined towards regarding it as of this Norse origin. I do not think, however, that he was aware of the full significance of the combination Egilsay and Kili (see above). Rev. A. B. Scott in his *Pictish Nation* deals with the organisation of the Ninian Missions, and shows how they were modelled on the establishment of St Martin at Tours. Apart from the church and the group of monastic buildings, the head or Ab of each settlement seems to have had for himself at some little distance a "cell" or cave or other retreat to which he could retire for prayer and meditation. Such was St Ninian's cave at Whithorn, and such I imagine was Kili Holm in connection with the Egilsay Mission. The main church or *eaglais* was on the island of Egilsay, and Kili Holm was probably the site of the cell or *ceall* (genitive, *cille*). There is no appearance of a house now on the holm, but only a big cairn of stones. It would be an interesting site, I believe, for a thorough archaeological investigation. We saw above that Monteith's name for the island is perhaps preserved in the name for the north point—Ridden. This also—Ridholme or Ridden—is a difficult name to explain from any Norse origin, and may represent some other Celtic word. Finally, a hostile critic might very well say that the curious juxtaposition of the two names Egilsay and Kili Holm may be regarded as a mere coincidence. But when we find a similar juxtaposition in another island, we must regard it as something more than coincidence. In Sanday, four or five hundred yards north of the Kirk and Kill o' Howe referred to above, lies the North Loch, and in between

lies a field known as Egiltun. The final element of this word is of course a well-known term for a field, but the *Egil* I strongly suspect to be the Celtic *eaglais* again. The absence of the "s" sound is curious, but the only alternative origin that can be suggested is the Norse personal name Egill, and in that case also an "s" should be present—*Egilstún. Furthermore, the disappearance of "s" can be paralleled in the name Ecclefechan, and the hybrid form appears also in Eaglesham and Eaglesfield. (See *Scottish Land Names*, p. 29.)

Finyan, etc. We have already considered Brae-an-finyan. In Rousay, also, there is a field called Fananoo (fänənú). Alongside this field runs a small burn. The u- sound hardly represents the O.N. á, burn, seeing that it carries the stress. Then again, on the edge of the Sourin Burn, where now the U.F. Manse garden lies, used to be a house called Manafinyie (mänəfinji). There is a small waterfall at the spot, and this may be borne in view when we come later to Mananeeban. What the origin is I do not know, but I feel certain, both from the sound and stressing of these names, that here again we must ascribe a Celtic origin.

Cro. On one of the Sanday farms called Trave (see *infra*) is a field called Kromerrandeem (kró:mærən:dím). As Trave is a certain Celtic word, it is not improbable that in this name also for the field the *Kro*-represents the Celtic *cro* rather than the Norse *kro*, which is indeed a borrowing from Celtic. The rest of the word is very obscure.

Gael. *linne*, a pool; Ir. *linn*, Welsh *llyn*. In Shapansay, near the Point of Ork in the north-east of the island, we have a small loch called Loch Linn. The O.N. *hlǫð*, a slope, is here inadmissible, as that word appears in Orkney regularly as Lee, or with the definite article—Leean (liən). •

Maes. This is a very puzzling word. It appears in Maeshowe—the famous chambered mound—and seems to be repeated in Masshowe in Holm—a name I have heard pronounced also méz:həu. On Blaeuw's map of Orkney, the present Maizer in Sanday is spelt Maisouer. This seems the same name—the *-ouer* representing the O.N. nominative singular *haugr*, or, more probably, the plural *haugar*, mound(s). Then there is Maeslee, a beach in Shapansay; Maestaing, a little taing in Gairsay; Maesquoy, a field in Harray with a knoll in it; Maesdale, a field in Burray; Mount Maisery, a chambered mound at the Start Point in Sanday; and Maeswell, a shoal off N. Ronaldsay. In the last-named island also there is a mound called Howamae (hóuəme), which Jakobsen fancied was the same name as Maeshowe transposed. Welsh *ma* or *maes*, a field, is cognate with Gael. *magh*, a field or plain; and Jakobsen was inclined to believe that this word must have been used of a hillock also—from its use in Orkney. This, however, is most improbable, and we may rather think of the Gael. *màs*, O. Ir. *máss*, buttock, as coming nearer

to the sense. But in any case, one has to look elsewhere than to Norse for any satisfactory origin.

Gael. *meall*, E. Ir. *mell*, a lump, knob, hill, etc. Off the Costa coast there is a sunken rock called the Mell which we may regard as from that root. Joyce, however, remarks that the Irish *mael* (used of a bare bald object) has a diminutive *maelan*, often applied to round-backed islands or round bare rocks.

Mam. Joyce says (*Irish Names of Places*) "the word *madhm* (pron. *maum* or *moym*) is used in the western counties to denote an elevated mountain pass or chasm; in which application the primary sense of breaking or bursting asunder is maintained." In Galloway, Mammy's Delph, a cleft in the cliffs, shows the word in the same original sense. Jakobsen ascribes the Shetland Mamiskala, a cliff with an opening clear through it; and Mamas-Hole, an opening in a cliff, to the same origin. In Birsay the word seems to appear also in Mamro (*mámru*), a "geo" or cleft in the cliffs.

Munt. Welsh *mnt*, a mound, cognate with *mynydd*, Gael. *monadh*, a mountain—from root *men*, to jut out. This appears in the Munt (*mónt*), a small promontory or elevation jutting out into Kirkwall Bay, immediately to the east of the harbour. Jakobsen found this word applied also to rocks or cliffs in Shetland. In Egilsay there is a small creek, running in among rocks, known as Muntlye (*Möntláí*). On the Ness of Tenston, in Sandwick, there is a place called Maemont, with tumuli near.

Man. Welsh *maen*, a stone. In Orkney we have the Old Man of Hoy, an isolated pillar or "stack" on the west side of Hoy; Manclett, a farm in Walls; Manafinyie, in Rousay (see above); Manmogila, now applied to a smallish pond near Maemont in Tenston; Mananeeban, a waterfall (sometimes called the Forces o' M——) on the burn of Netherbrough in Harray; and Sinchman (*seín/mæn*), a fishing rock on the Birsay coast. There is an Old Man of Coniston, another Old Man in Cornwall, and a third in Skye. Isaac Taylor derives these from Celtic *alt maen*, high rock. *Maen* is Welsh, but *ailt*, high, while found in Irish and Gaelic is not Welsh. There is, however, an Old Welsh form *allt*, meaning cliff. Professor Watson informs me that the Old Man of Storr in Skye is a mere euphemism; the real name is Bod Storr—the phallus of Storr. Another complicating factor is the occurrence several times in Orkney and Shetland of Gamal or Gamli as a name for a cliff. At first sight this would appear to be the Norse equivalent of Old Man (O.N. *gamall*, old); but Jakobsen regarded this as a broken-down **gamla mið*, old (fishing) mark. The various examples of *man*, both in Orkney and elsewhere, give probability, however, to a Celtic origin. Manclett would

thus be a hybrid (O.N. *Klettr*, rock), each element being synonymous (cf. Mên-rock in Cornwall, and the Carr Rocks at Crail and Berwick-on-Tweed). In Sinchman the first part may be a cognate of Gael. *sean*, old (cf. Early Irish *sinser*, an elder). Contrary to the usual practice in Gaelic, *sean* is placed before its noun.

Orc. Besides "Orkney" itself, we have the Ness of Ork in Shapansay, and *Orkahaugr*, the Saga name for Maeshowe. In Deerness there is a mound, Howe Húrkis (həu:hórkəs), which Jakobsen was disposed to regard as a transposition of the two elements in Orkahaugr. In Shetland, on the west coast of Unst, is a cliff called the Orknagabel, which fishermen at sea refer to as "de Orka" or "de Orki," "de face o' O—," "de gable o' O—." On the west of Dunrossness are found two hills, de Muckle and de little Orka. Then we have the Ptolemaic Orcas—probably Dunnet Head. Jakobsen was of opinion that there was a connection between the old Pictish *orc* (seen in Orcas) and these *orc*-names in Orkney and Shetland, which makes it appear probable that *Orc* has been a term for a projection or elevation. In his Rhind Lectures, and again in a more recent lecture reported in the *Inverness Courier*, Professor Watson offers the weightiest grounds for regarding "Orkney" as a word derived from a Pictish tribe—the Orcs—who resided in Orkney, and are often referred to by old Irish writers. Professor Watson's distinction as a Celtic scholar and the authority with which he speaks on place-names are well known, and in the face of the evidence he adduces it is most unwise to accept any other explanation. In that case Orka- might perhaps be regarded as a Norse genitive plural and *Orkahaugr* be taken as the "howe of the Orcs."

Papa. When the Norse came over to Orkney, we are told in the *Historia Norvegiae* they found the isles occupied by two classes of people, the *Papae* and the *Peti*, or Picts. The former were the Christian missionaries, and their name is still preserved in Papa Stronsay, Papa Westray, Papdale (Kirkwall), and Papley in Holm, and S. Ronaldsay. The same name is probably to be found in the Steeven o' Papy, a rock off the shore of N. Ronaldsay. The first two are still called Papey (pāpi) locally, but for the sake of reference people outside of Stronsay and Westray generally speak of them by the map names, and then the word is pronounced Papa (pāpa). The Saga names are *Papey meiri* (P. Westray) and *Papey minni* (P. Stronsay). Papdale must represent an O.N. **papa dalr*, valley of the Papas—in this case Kirkwall—where there has evidently been a Christian settlement. Papley (the Saga *Papuli*) is probably a contraction of **papa-bøli*, the homestead of the Papas. In Pittaquoy (Graemsay), Pickiequoy (Kirkwall), and Quoypettie (Deerness) we seem to find traces again of the early inhabitants, the

Picts or Petts. Pentland Firth is, of course, the old *Pettlands-fjörðr*, and by the older generation is still called commonly the Petland Firth.

Ros. Gael. and Ir. *ros*, a promontory. Roseness (róz:nez) in Holm is one of the boldest and most characteristic promontories in Orkney—running out towards the south-east and ending in some magnificent crags. I have little doubt that we have here a hybrid of synonymous names, Gael. *ros* and Norse *nes*. In Orkney we find O.N. *hros*, horse, frequently combined with *-ness*, but the pronunciation is always Russness (róz:nez), while the Holm name is pronounced with a long *ō* sound. On the headland is a farm called Roy, also suspiciously Celtic in appearance.

Welsh *rhaiadr*, cataract, waterfall; *rhaidru*, to spout out. Jakobsen considered that this appeared in Orkney sometimes also, in the sense of "spring." In the Harray hills is a well called Inyar-ia (ínjəräia or ínjəräia). This he explained as "cool spring," deriving the first element, I think, from *fionn-fuar*, which appears in Gaelic as *fionnar* and in Mid. Irish as *indfhuar*, cool. In Rousay the same word seems to appear in the name of a rocky hill above Hüllion—Marlariar (márləräiər), and in Egilsay a bay goes by the name of Ramriar (rámräiər).

Gael. *sruth* (also Irish), a stream. In Egilsay there is a well just above the Sand of Skail known as the Well o' Struith (strøð). A tiny stream runs past it. Near Stromness there is the Burn of Straither (stréðər). This is a diminutive form used in Ireland—*Sruthair* (pron. sruhar) according to Joyce, and occurring in Scotland as well, e.g. Anstruther.

Gael. *tobar*, a well. This appears in the island of N. Faray as the name of a small point—the Point of Tober (pron. túbər). Alongside this point is a narrow "geo," and at the head of the geo, but separated from it by a narrow bridge of rock, is a deep hole or "gloup" or well, about 15 feet in diameter. The water in this hole is about 5 fathoms deep, and the sea ebbs and flows through an opening underneath the bridge of rock referred to.

In Rousay there is a small ridge, which occupies the bottom of a small valley or corrie among the hills, and which used to be known by the quaint name of "The Camps o' Jupiter Fring." Now it is merely termed "The Camps." This last term is probably the Norse *Kambr*, a "kame" or ridge, but the other part is very obscure. There is a well also at the spot, and Mr A. W. Johnston has suggested to me that the name represents *tiobart air fring*, the "well upon the hill-brow." *Ffring* is a Welsh term for brow or ledge, and *tiobart* is a Gaelic term for "well," though apparently not found in Welsh. At all events, whether this be correct or not, it is the most reasonable conjecture that has been made with regard to this Olympian name.

Treb, Trave. Early Irish, Old Welsh, and Old Breton *treb*, a dwelling, homestead; Welsh *tref*, id. (Cf. Early Irish *trebaim*, to inhabit or cultivate, and Gaelic *treabh*, to plough, till.) In his Rhind Lectures Professor Watson stated (*Scotsman* report) "the term *Treb*, Welsh *tref*, a settlement, appeared from Inverness to the Forth on the east, and south of Forth and Clyde, in such names as Cantray, Fintray (white stead), Ochiltree (high stead), and Threave, the Douglas hold on an islet in the river Dee." The word occurs in Orkney also. In N. Ronaldsay there is a farm called Trebb, the land on which is reputed to be the most fertile in that island. In Sanday there was also a house of this name—now forgotten. In Sanday also, in several places, are to be seen the remains of prehistoric, low, earthen ramparts. They are really too broad to be called dikes, but the name given to each is the *Treb* or the *Treb Dike*. In fact, they are so numerous that the word is now employed as a generic term, and, in Sanday, one speaks of a *treb* dike or a *trebby* dike. There are also three farms in the island called Trave. I had long suspected this to be the same word, but last summer I had striking confirmation. In Burness there is a *Treb* dike that runs in a north-westerly direction past the farm of Neagar. It then loses itself in a huge mound called Gorn—probably the site of an old broch. On the other side of this mound it emerges again, and a few yards farther on we come on the house of West Trave, actually built on the *Treb* itself.

Twyn. In Orkney there are several instances of the name *Twynes* (*twínjez*)—in N. Ronaldsay, Westray, Shapansay, and St Andrews—always applied to a point or ness. In none of these is there any possibility of finding the O.N. *twi*, two, and indeed the palatalising suggests the presence of two n's in these names. Jakobsen was satisfied that we have here the Cymric root which appears in Welsh—*twyn*, headland or promontory. Thus once more we find a hybrid with the two elements synonymous—*twyn*+*ness*.

In addition to the above words there are some others that are quite non-Norse in sound or application. Among these I may mention Pontith (*póntəp*), the name of a point jutting out into the Loch of Harray; Cloudie, the name of a piece of land near Cleat, Westray; Pinquoy (*pón̄kwí*), a small ridge of land surrounded by a marsh in Egilsay; the Burn of Peeno, running down from the hill of Blotchniefell in Rousay (there is a river-name *Piná* in Norway also for which Rygh offers no explanation); and Pullan, the north-west shoulder of the Ward Hill of Orphir.

In conclusion I shall refer to a few names that seem to commemorate the names of some of the early Celtic saints. The Saga name for N. Ronaldsay was *Rinansey*, the island of *Rinan* or (almost certainly)

Ringan—a variant of the name Ninian. Colm's Kirk is a name applied to several old church sites in Orkney, and these the Rev. A. B. Scott (in his *Pictish Nation*) would attribute to the Pictish St Colm or Colman rather than to the great Columba. On the other hand, there is a place in Sandwick called Clumlie (Klómli), and on an old map appearing in a Dutch edition of Camden's *Britannia*, published at Amsterdam in 1617, the name *St Columban* is marked at this spot. In Shetland the name Clumlie also occurs, and the late Mr Gilbert Goudie (followed by Jakobsen) regarded it as derived from Choluimeillie. The stress, however, in this latter word falls on -cille, a fact that would seem to invalidate the above suggestion. Nevertheless, the appearance on the map of St Columban renders it probable that Columba's (or Colm's?) name is represented in the word Clumlie. Mr Scott would also regard the name Deerness as derived from the Celtic *daire*, an oak grove, which he says was used by the Pictish clergy of their churches. Now, although there are plain traces of a church settlement on the Brough of Deerness, that seems the slenderest evidence on which to base the theory that *daire* was corrupted into the Saga word *Dyrnes*, from which the present name is descended.

In the foregoing pages, dealing as they do with obscure names that have for the most part never been discussed before, and of which there are unhappily very few old spellings available, there are no doubt many errors that would have been avoided by any one really skilled in Celtic philology. If any such scholar on reading this paper would be kind enough to communicate with me on any of the points raised, I should esteem it a great favour. My best thanks are due to Professor W. J. Watson, of Edinburgh University, for his great kindness in replying to my numerous queries on different points, but no responsibility rests on him for any of the views expressed herein.

III.

SKIPNESS CASTLE. BY ANGUS GRAHAM, F.S.A.Scot., AND
R. G. COLLINGWOOD, F.S.A.Scot., F.S.A.

I. INTRODUCTION.

Skipness Castle (fig. 1) is familiar to antiquaries as an interesting and well-preserved example of a castle of the second rank. It was fully described and illustrated, over thirty years ago, by MacGibbon and Ross in their monumental *Castellated and Domestic Architecture of Scotland*, vol. iii. (1889) pp. 64-75, which may be taken as the standard account, and is indeed the only one hitherto attempted. The present writers, working under the advantage of greater visibility and ease of accurate measurement due to the removal by the late R. C. Graham in 1898 of the farm-buildings which, since the eighteenth century, had encumbered the site both inside and out, have found it necessary to abandon so many of their predecessors' conclusions as to demand a restatement of the whole case. Plans on a large scale, and more accurate than any previously made, were therefore prepared, and a thorough study of the remains undertaken, in which the authors were fortunately able to enlist the help of skilled architects; a number of new facts came to light, and the following paper was written.

Skipness Bay¹ is a slightly concave stretch of shingle about 1500 yards long, extending from the rocks of Skipness Point to the west end of the village; a large burn enters the sea at the west end of the beach, and a smaller one about the middle. The beach terminates in a gravel bank, behind which the ground was in ancient times probably swampy. Inland the ground rises gently; on the west to join the general eastward slope of the Kintyre peninsula, on the east to form a small triangular plateau at an altitude of about 150 feet, lying between the village, pier, and Point of Skipness.

The immediate site of the castle is a gentle slope of successive raised beaches with a general south-south-west aspect. The castle stands 230 yards from the sea at an elevation of 40 feet; the artificial terraces lying to south and west were made in the nineteenth century. From the top of the keep there is a perfect view of the beach, Kilbrannan Sound, with both its Kintyre and Arran coasts, a portion of the sea between Arran and

¹ See O.S., Scotland, 1-inch sheets 20, 28, 29; 6-inch, Argyllshire, sheets CCXIII. N.E., S.E. A general description of the district has been given by the first-named author in the *Proceedings*, vol. lili. pp. 77-80.

Bute, and, on the inland side, up to $1\frac{1}{2}$ mile of the old road from West Kintyre. The only direction in which observation is bad is the north, but there is not enough dead ground to cover the movements of a hostile force within 550 yards of the castle in any direction. The smaller burn above mentioned, which is practically never dry, flows within 60 yards of the castle, and was always within easy reach except during an actual siege.

The lower course of this burn runs between artificial banks, and

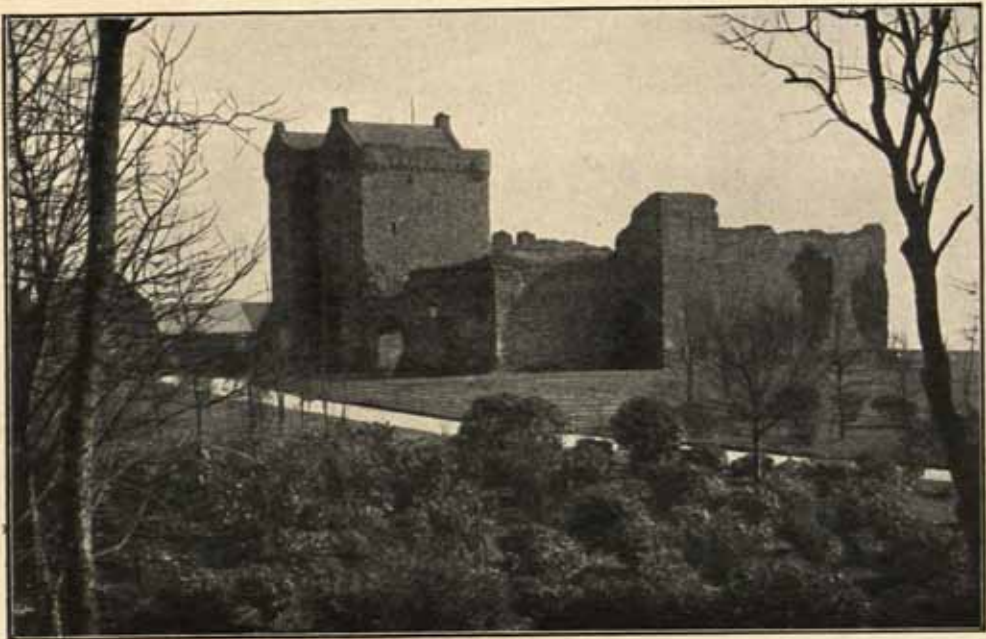


Fig. 1. Skipness Castle from the North-west.

may once have given rise to a little marshy ground on what is now its left bank, about 100 yards from the sea; but this is too far from the castle to be a real defensive feature under archery fire, and could always have been turned, out of range, on the east. MacGibbon and Ross speak of a ditch and mound to north and a moat to south; but of these there is nowhere a trace, and the evidence which they quote does not suggest that traces were ever visible.

The flat ground about the present village must even in ancient times have been agriculturally valuable, and the mouth of the larger burn would always provide shelter for a few small boats, though otherwise the beach is exposed and there is no safe anchorage. The very place-

name, however, points to the existence of a sea-faring population here since before the beginning of the Middle Ages.¹ The strategic value of the site is small, and its military aspect may be summed up by saying that the castle is capable enough of looking after itself but does not appear to be looking after anything else.

The buildings, alterations, demolitions, and rebuildings of perhaps eight centuries, of which the erection of the farm-steading late in the eighteenth century was certainly the most destructive, have left a fabric which was never planned as a whole and does not afford sufficient data for a complete reconstruction of the castle as it stood in any single period. The steadying-builders in especial, though handsomely complimented by a contemporary writer² on *The Beauties of Scotland*, destroyed every vestige of the buildings which till then had stood round the inside of the courtyard, cutting the partition walls back flush and covering the detail of masonry with plaster or a thick tenacious whitewash; and since the whole has been built without underground foundations, the plan cannot be recovered by excavation, though this was attempted by the late owner. The whole structure, therefore, is now reduced to a bare enceinte with a keep in its north-east corner. These are, fortunately, in very good preservation, standing their full height almost everywhere, and under close inspection yield enough evidence for a conclusive reconstruction of the stages by which they have been built, and even for some attempt at dating each individual phase of this history. In the absence of written records bearing on the fabric, the authors are not inclined to attach great importance to their attempts at solving the second of these problems. Since excavation has proved fruitless and early descriptions are wholly lacking, the attempt to make the existing walls tell their own story is the only means by which that story can be determined; and it is therefore unlikely that any materials better than those now at hand will ever become available.

II. THE REMAINS.

The castle as it stands to-day is an oblong enclosure of about 27 by 40 yards, the regularity of whose plan is disturbed by three projecting

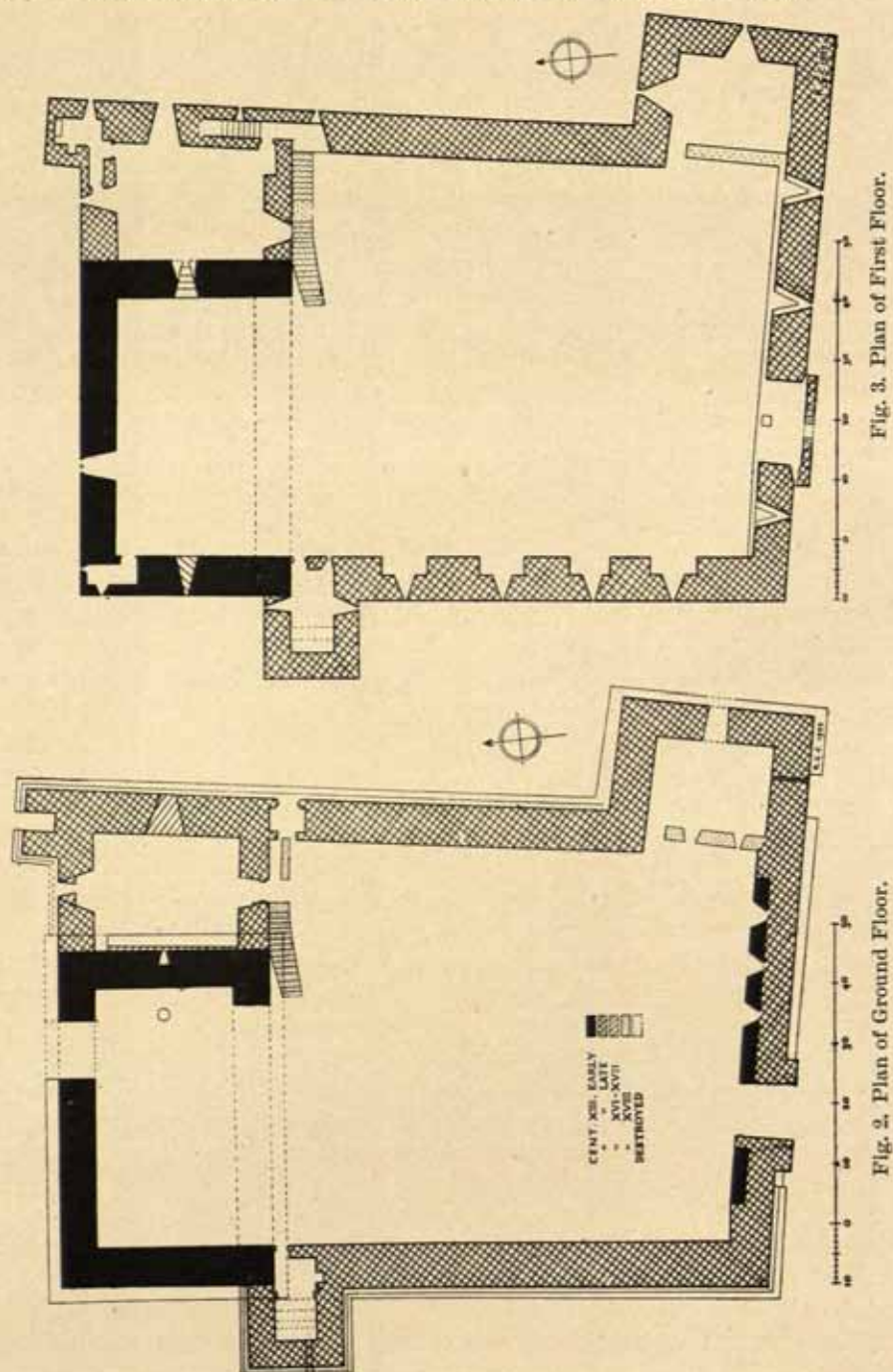
¹ O.N. Skipa-nes, ship-point; corrupted early to Schephehinche (1261), Schyphhinche (1262), Scybinche (1265), Skipinche (1495), Skippeneische (1620), and other forms still represented by the modern G. pronunciation, Sgiobanis (=Shkeepenish). The modern written form is a recorruption of this, originating perhaps with the Skibbenes of T. Pont's map (1600), and established certainly by 1756. Port Sgiobanis, in Colonsay, retains the correct G. spelling of the same name.

² "... (barracks) now converted, with great propriety, into a handsome court of offices. These, with other improvements both within and without the castle, have a very pleasant effect; exhibiting to the eye, at one view, modern elegance and ancient grandeur happily combined together."—Forsyth, *Beauties of Scotland*, Edinburgh, vol. v. (1808) p. 451.

towers, namely at the north-east and south-east angles and near the centre of the west side. Ignoring these projections, the external measurements of the enclosure are: north side 82 feet 8 inches, east side 132 feet, south side 78 feet 9 inches, and west side 119 feet 6 inches. The north-west corner alone is a true right angle, the north-east being 87°, the south-east slightly less, and the south-west 94°. The thickness of the curtain-wall is fairly constant: on the north it is uniformly 6 feet 3 inches, on the east about 6 feet 10 inches; the south curtain diminishes from 7 feet 8 inches at its east end to 6 feet 10 inches at the south-west corner. The west curtain for two-thirds of its length preserves a thickness of about 7 feet 3 inches, but north of the west tower it is only 6 feet 7 inches. The east curtain stands 32 feet high to the parapet-walk; the others, while not so well preserved, seem to have always been a foot or more lower. The embattled parapet was 6 feet high and 2 feet 4 inches thick; each battlement measured about 3 by 5 feet on the east, though elsewhere they seem to have been slightly larger. The whole castle is built of local mica-schist, with quoins and details of red sandstone probably brought from the north end of Arran.

The castle was entered through a gateway in the south curtain, whose centre is some 30 feet from the south-west corner. The entrance, which is 9 feet wide and 9 feet 10 inches deep, is pierced through a gateway-tower projecting some 2 feet from the face of the wall. From a chamber above the gate the portcullis was operated, and was defended by a machicolation; lateral windows of cruciform design served to enfilade the curtain-wall from the same chamber. Another entrance was by a postern in the east wall; the archway in the centre of the north wall is modern.

The north-eastern corner of the enclosure is occupied by the keep. This is a tower measuring externally about 32 by 36 feet, consisting of a vaulted basement, three upper storeys, an attic whose floor no longer exists, and a parapet-walk with a capehouse. The basement is entered by a round-headed door 2 feet 10 inches wide in the centre of its south side. Opposite this is a loophole 8 inches by 10, opened in the back of a recess which represents a walled-up square window. Another square window, also walled up, is externally visible in the east wall; inside only the lower part of its jambs can now be seen, the upper part being covered by the vaulting. There has also been a window, measuring 6½ by 8 inches, high up on the west side; this also is now blocked by the vaulting. Below the springing of the vault on the west side the wall batters strongly, its footing being 2 feet in advance of the springing, though only 4 feet below it; this batter, as we shall see later, is a plinth dating from a period before the keep was built. In



the north-west corner a shoot 3 feet 4 inches wide leads to the room above. It is clear that the small west window is the oldest of all these apertures; that the door and the two square windows were opened at some late date when the room, hitherto a mere cellar, was converted to more domestic purposes; and that the blocking of two windows by the insertion of a barrel-vault and the reduction of the third to the size of a musketry loophole represent a still later alteration.

The first floor of the keep is entered by a door in the south-east corner, reached by an external staircase. Staircase and door alike are modern, and the original entrance was probably by a door where the tall window now is in the south wall; in old photographs, and to a certain extent even to-day, traces of plaster show where an external stair has led up to this opening in a line parallel to, but west of, the modern external stair. The first-floor room is the same width as the basement, allowing for space taken up by the springing of the vault on either side; but it is 6 inches longer owing to an offset in the south wall, designed to carry the floor before the basement was vaulted. In the west wall there are traces of two windows, one above the other, and both now built up. The lower window came down to floor-level and rose to a height of only 3 feet 9 inches. The walling-up masonry is only 1 foot thick, and the window can therefore be studied from outside. It is a round-arched opening 4 feet 2 inches wide and 8 feet 3 inches high, with a sill 9 feet 9 inches above ground. In width it narrows towards the interior of the keep; but 3 feet in, the upper part of the side-cheeks begins to splay outward again, the lower part continuing to contract as before. The result is, that the lower part, by the time it penetrates the wall, is only 8 inches wide, and forms the small west window above described in the basement; the upper part, widened to 4 feet 6 inches, forms an embrasure of that width at floor-level in the first-floor room of the keep. This curious feature can only be explained as having been originally a window 8 inches wide opening eastward in an earlier building standing west of the present keep. It was a first-floor window, the floors of this early building being lower than the corresponding floors of the keep. When the keep was built the lower part of this window was turned into a window for the new cellar; the upper part was adapted for use as a first-floor window by cutting out in its sides a splayed embrasure facing west, and inserting sill, lintel, and wooden window-frame. Sockets for these, and the plaster of the cheeks, are still visible.

Above this is another walled-up window, originally a rectangular opening 9 inches wide and 4 feet or, probably, more in height. Its sill is 8 feet 6 inches above the floor, and the jambs and sill visible

inside the keep are clearly the outer opening. The head, now gone, may have been a straight lintel or an arch. The inner opening, a pair of jambs 4 feet 1 inch apart with the ends of window-seats showing between them, can be seen on the outside of the keep; indicating that we have here a second-floor window of the same early building whose first-floor window has just been described.

In the north wall a narrow window has been pierced, and from an arched opening in its eastern side a mural passage 8 feet long leads to a garderobe in the north-east tower, with a window in its eastern side and an aumbry in its western. More direct access to the same garderobe is obtained through a door in the corner of the room; but this is a late addition to the plan, put in perhaps when the window was fitted with a chimney-flue for the insertion of a brazier or other heating apparatus.

The east wall has a large square window, obviously a late addition, and in the south-east corner is a recess in which is the door leading to the straight mural stair going up to the second floor. The modern entrance to the keep is at the foot of this stair.

The second storey consists of a single chamber the same size as that beneath it, entered by a door at the top of the mural stair. The doorway has originally been a pointed arch 4 feet 2 inches wide, but this has been narrowed to a square-headed opening 2 feet 9 inches wide. The passage into which this door opens has been cut off from the stairs by a door placed exactly at the stair-head, and opening into a recess cut in the east wall, over the upper steps. It seems probable that this door was dismantled when the former doorway was narrowed and a door hung there in place of a mere curtain. The passage is lit by a small window, south of which a red stone quoin runs right through the wall and seems at first sight to be one side of a larger window; but it is actually one end of a battlement now incorporated into the wall, since this floor of the keep is on a level with the parapet-walk of the curtain-wall. At the north end of the passage a newel stair begins, giving access to the third floor.

The second-floor room has windows at the south-east and north-west corners, and formerly had a cruciform window in the north wall, opening by way of a mural passage into a garderobe in the tower, like the corresponding window below; but the passage has been blocked up and the window turned into a fireplace. The garderobe has three cruciform windows, and a shoot from the garderobe above, in the form of an oblong pier of rough masonry, fills its north-east corner and is an obvious addition to the plan.

Externally the north wall of this room shows two built-up openings,

one on each side of the cruciform window. At first sight these seem to be square windows, in spite of the absence of lintels; but there are no internal jambs, and one of them would only have lit the mural passage, which, when the square windows were being built, was apparently already blocked by the flue from the room below. The openings in question thus cannot be windows, and are in fact embrasures between battlements which existed here before the keep was built.

The third-floor room is entered by a pointed arch from the newel stair, and is 1 foot wider than those beneath, its floor being carried by an offset in the east wall. A square window in the south wall has been converted into a fireplace; a west window, with seats, is still open; and a north window, with mural passage to the garderobe, is partly blocked by chimney-flues from below. The garderobe has one window, facing north.

From this floor a ladder gave access to an attic in the gabled roof, lit by a small south window. The floor of the attic has gone, but the state of the walls sufficiently shows that it cannot have been reached by a door from the stair.

The tower is crowned by a parapet 1 foot 6 inches thick, corbelled out about 6 inches over the edge of the walls, and extending into bartisans at three corners and in the centre of the south side. The fourth or north-east corner, being the top storey of the garderobe tower, is separately roofed to form a capehouse, with an aumbry in its west side, another in its south-east corner, a fireplace in the north wall, and a garderobe corbelled out to the north-east.

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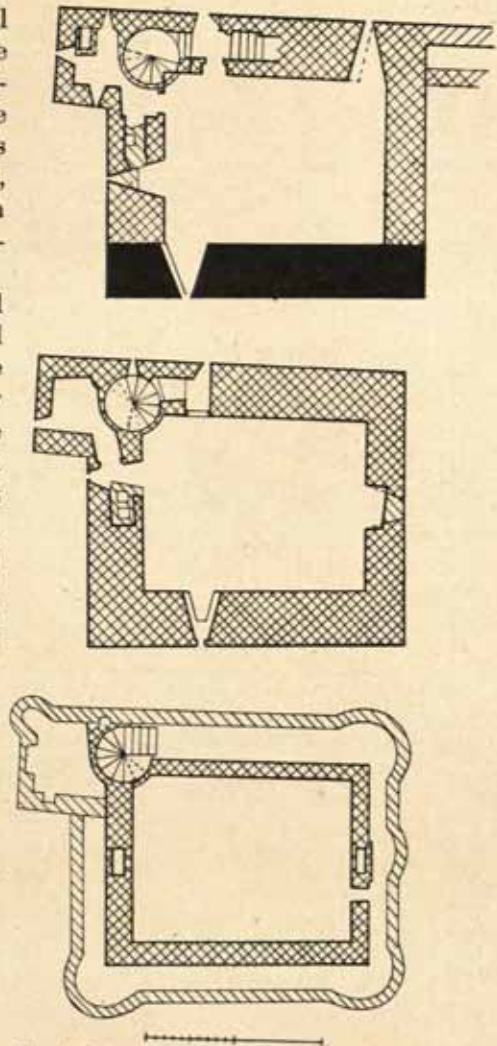


Fig. 4. Second and Third Floors and Parapet-walk of Keep (north to the left).

The exterior of the keep shows unmistakable signs of having been built at different periods. Apart from questions of style, which would place the main fabric early and the square windows, corbelled parapet, and gables late, these signs are as follows:—(1) Battlements incorporated into the wall at second-floor level; (2) windows in the west wall originally designed to look eastwards; (3) quoins *in situ* about 6 feet from the west end of the north and south walls, with which must be associated the plinth inside the basement and a con-

tinuation of the same plinth along the western end of the north and south walls, together with the broken-off end of a wall running westward from its south-west angle. Of these evidences, (1) shows that the keep was built upon a pre-existing curtain-wall; (2) and (3) show that it was built up against the east wall of a pre-existing building to the west of it, which was dismantled when it was built. This building was not only earlier than the present keep; it is also shown by the quoin at its own north-east angle to have been built before the curtain-wall was contemplated. We thus get a series of structures, each of which constitutes not only an addition but an afterthought:—

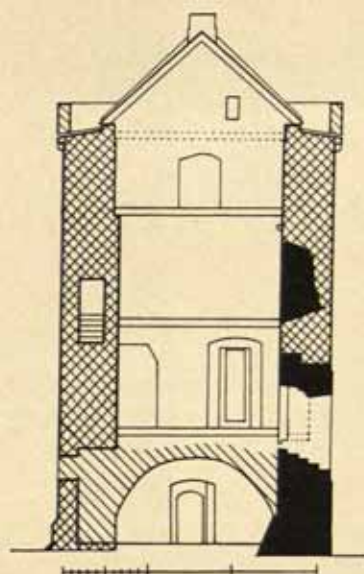


Fig. 5. Section through Keep.

- (a) A building lying west of the present keep;
- (b) the curtain-wall, of which the garderobe tower to second-floor height forms part;
- (c) the keep.

The east curtain south of the keep is a plain wall crowned with battlements. These seem to be smaller than those elsewhere remaining, and are of local mica-schist instead of red sandstone; these peculiarities are probably due to repairs rather than to original diversity of structure. The wall is pierced by a postern 3 feet 4 inches wide, a square-headed door with a chamfered lintel, now gone, and a relieving arch above. Inside the door-jambs the doorway expanded to 6 feet wide, thus forming a small mural chamber. The features of the postern are late, apparently seventeenth century or not much earlier; but the existence of an early postern here is suggested by the presence of a window of early type directly above it, being the only window in the east curtain, which may have been reached by a wooden gangway from the door of the keep and used for defending the postern. It is, however, possible

that this is the only surviving window of a building which, before the present keep was built, occupied its site and extended a little way further south. That there was such a building is suggested by the existence of the garderobe tower; and it seems best to suppose that the window in question is a relic of it and is unconnected with the postern, which is therefore an addition of perhaps the sixteenth or seventeenth century.

The parapet-walk was reached by a stair at the south end of the curtain, of which the topmost flight of seven straight steps is still visible; the lower part may have been a newel stair, and traces of it perhaps exist in an irregular block of masonry at ground-level.

The south-east tower has been a three-storey building 19 feet 8 inches long internally from north to south. Its breadth is doubtful. The existing partition-wall, which makes it 14 feet 10 inches, is probably modern; and the shape of the south window on the second floor suggests that the original width, at this level at any rate, was 9 feet 9 inches. The basement was provided with a water-conduit cut through the south wall, the plinth outside being cut away to allow a cart to approach and discharge water into a basin, from which it flowed into the castle. As there are no

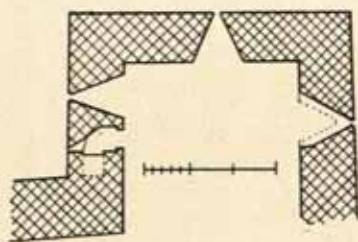


Fig. 6. South-east Tower, Second Floor (north to the left).

signs of a water-tight cistern, the water was probably stored in butts. The first floor has windows facing north and east; the second floor has them facing north, east, and south, the last having window-seats and having its western cheek cut off by a right-angled face instead of continuing its oblique angle to the end, which suggests that it here came into contact with the fourth wall of the room. The suggestion is borne out by the position of the entrance to the garderobe in the north wall, which is unnaturally forced eastward in order to bring it within the same line. The garderobe consisted of two parts: the garderobe proper, now blocked up, and a little anteroom lit by a separate window. The rather large windows and good masonry of the south-east tower suggest that it contained some of the best rooms in the castle.

The south-east tower, together with the south curtain as far as the gateway, shows certain peculiar features. It has plain windows 6 inches wide and chamfered externally, instead of the 3-inch cruciform slits usual elsewhere; its plinth is a plain slope of mica-schist instead of the stepped red sandstone plinth which is normal in the curtain-wall; and it meets the east curtain in a straight joint which proves it later in

date than the curtain. On the other hand, the rest of its architectural details are of the same period as those of the curtain-wall generally, and therefore, though it is probably an addition to the original plan, it is one made very soon after the main building.

The south curtain, omitting the gateway, which has been described above, is remarkable for the presence of three round-headed arches, resembling walled-up windows, on its inner face at ground-level. Excluding the two late square openings in the keep, there are no other ground-floor windows in the castle, and never have been; moreover, these show no external jambs, and their sides if produced would meet at considerably less than half-way through the wall. That they are windows and not recesses, but windows in an earlier and thinner wall, is proved by the discovery of red sandstone quoins in the right position for their outer jambs on the supposition that they pierced a wall about 2 feet 6 inches thick. This has been an earlier wall incorporated in the south curtain of the castle. It can be traced for a length of 54 feet 6 inches, beginning close to the south-east tower and ending at a well-marked angle in the face of the curtain 6 feet from the south-west corner. The wall so traced has clearly been the south wall of an isolated building. Beside the three windows, one jamb of the door is still visible west of the gateway. It seems clear that the line of the enceinte was deliberately drawn so as to incorporate the south wall of this building, which explains the irregularity of the angles. It is also noteworthy that this wall shows a style of building unlike the usual style of the curtain-walls and more like that described below at the north-west angle (p. 277, 12 lines from bottom).

A range of buildings ran right along the south curtain. East of the gateway their first storey was lit by two 6-inch windows with seats; west of the gate, by a single cruciform slit also with seats. The portcullis-chamber above the gate formed part of the first-floor buildings, from which it seems to have been entered by two wide pointed arches and not shut off by any kind of doorway. Above this level ran the usual parapet-walk with battlements, whose red sandstone quoins are still visible.

The west curtain falls into two parts, separated by the west tower. The southern part, 70 feet long, was furnished with a range of buildings lit on the first floor by a series of four similar windows, all 3-inch cruciform slits without window-seats placed in recesses about 3 feet deep and 7 feet 6 inches wide, the measurements varying only slightly from window to window. It is tempting to identify these as the windows of the great hall; but this would give a hall of unnatural length for so small a castle—72 feet as against 65 feet at Bothwell and 72 at Kildrummie—and the position of the gateway makes anything like a commensurate

breadth impossible. If this was the hall, it was probably subdivided by wooden partitions.

The west tower, like that on the north-east, is merely a garderobe tower. It contained three garderobes, echeloned with the lowest inside and the highest outside. At ground-level there is an aumbry in the south wall, and beyond this a corbel at each side supported the ground-floor garderobe fitting; a vertical slot in front of each corbel being evidently designed to hold a board on edge. Immediately behind these corbels are the springings of an arch, now broken away, which once supported a cross-wall 2 feet thick. On this wall the first-floor garderobe was mounted, and behind it was a shoot about 1 foot 10 inches deep and extending the whole width of the tower. Beyond the shoot and at a higher level the springings of another and similar arch are visible; this supported a second cross-wall which served the second-floor garderobe, and beyond which was a similar shoot. Finally, at the foot of the west wall a drain 10 inches wide carried off liquid matter through the wall. The second-floor garderobe, it should be observed, opened on to the parapet-walk and rose like a turret above the general level of the curtain.

It has been mentioned that one end of a broken-off wall is visible at the south-west corner of the keep. The other end of the same vanished wall can be seen immediately north of the doors which give access to the ground floor and first floor of the west tower. It is clear that this wall was once continuous, and enclosed an area of 43 feet by 23 feet 6 inches, lying to the north of it. The walls surrounding this area were uniform in several ways. They were all between 6 feet 2 inches and 6 feet 7 inches thick; they were all built on a plain sloping plinth 2 feet to 2 feet 6 inches wide and topped with a course of red stones; their windows have round instead of pointed internal arches; and their masonry, so far as it survives, has a character of its own, being coursed alternately with thick and thin stones, the thicker courses often packed with small flat stones set vertically. All four corners of this enclosure are visible: the north-east and south-east in the walls of the keep, as already described, the north-west standing free, and the south-west at first-floor level inside the western tower. We have now to describe the west wall of this enclosure. It presents no features except a walled-up window on the first floor, of the same type as that directly opposite to it in the west wall of the keep, and a garderobe of rough workmanship and perhaps of late date in the north-west angle. But both here and in the north curtain and in the west wall of the keep a 3-inch offset can be seen 8 feet 6 inches above the ground, showing that this enclosure had floors at that level; and traces of a second offset, together with the upper window in the keep, indicate a second storey at 21 feet.

The north curtain, except for the modern gateway, is simply the north wall of the same enclosure. Its only remarkable feature is a first-floor window which now looks like a single round-headed opening, but on closer inspection is seen to have contained two pointed lights elegantly moulded and divided by a slender mullion.

III. HISTORICAL CONCLUSIONS.

The above description of the remains makes it impossible to accept the only account hitherto published of the castle's architectural history, namely, that of MacGibbon and Ross. By them it was supposed that the original castle consisted of the southern two-thirds of the enceinte; that the north-west corner was added later and the keep built last of all. Had this been so, the unmistakable proofs that the keep is built upon a pre-existing curtain-wall, and that the north-west corner was built not only before the keep but before the southern part of the enceinte, would have been absent. In point of fact they were not noticed by those authors; who also missed the significance of the blocked windows in the south curtain, and through failure to plot them correctly imagined that they could have penetrated the existing curtain. Again, if their view had been correct a number of features would have existed which are absent: the wall from the postern to the west tower would have been constant in thickness and style and would have had a plinth to northward; quoins would be visible in the east wall 6 to 8 feet north of the postern, and so on.

The only theory that can be made to square with the facts above set forth is as follows:—There were originally two buildings close together, a small castle and a non-defensive building a little south of it. These were then linked up by an enceinte-wall—the present enceinte—in which the original small castle—the present north-west angle—acted as keep, the southern building being demolished except for its south wall. Afterwards the original castle also was partially demolished, and the present keep built upon its east wall and the north-east angle of the enceinte. The details of this process will now be stated, together with their historical context so far as that can be made out.

The earliest castle, of which remains are now visible, was an oblong enclosure 42 feet 10 inches by 23 feet 8 inches internally, with walls from 6 feet 2 inches to 6 feet 7 inches thick. These walls were solidly built with excellent mortar, and were so far homogeneous in style and fabric that their remains are clearly recognisable in the west wall of the keep and the north-west corner of the enceinte. The castle was probably entered from the south. Robert Forsyth, in *The Beauties of*

Scotland, vol. v. (1808) p. 451, describes the south wall as still existing in his time "with a large gate in the middle . . . in the Gothic style," and this may well have been the gate of the original castle. In any case, the gate would naturally be on the south, because an enceinte added to an existing castle would naturally be drawn on the same side as the entrance. Three first-floor windows and one on the second floor still exist, and are rather remarkable for the good style of their work; and the offsets show that the floor-levels were at 8 feet 6 inches and 21 feet above the ground. There is no positive proof of a third storey, and the walls may have terminated in battlements about 35-40 feet from the ground; but from analogy and from the relation of the building to the later enceinte we should expect a third storey.

This was an isolated building, without even a moat round it; but 20 yards away to the south was another smaller stone building overshadowed by it and of a very different character. This was a long and perhaps narrow building, low in the roof, and having thin walls and several windows low down: it was well built and plastered internally, and was therefore neither a defensible point nor any kind of mere farm-building. It can only be explained as a chapel; the more so, as it was entered by a door at the west end of its south wall and had windows grouped about its east end. East of these windows again there is still visible something that may be the remains of a piscina; but it is too much weathered for safe identification. In any case, it seems clear that we have here an early chapel of a familiar type, with windows like those of Keils, Kilmory, and other well-known sites, which though showing Norman influence need not be placed as early as the Norman period, but only in a period before the Early English pointed arch had penetrated to these parts.

If MacGibbon and Ross are right in maintaining that the use of mortar was introduced into Scotland about 1200, these two buildings cannot be earlier. Apart from this, however, the architectural features would lead us to a somewhat early date, preferably in the first half of the thirteenth century, and perhaps in its first quarter.¹ At this time,

¹ Mr G. P. H. Watson, to whom the authors are indebted for kindly reading their paper in their unavoidable absence, has further increased their debt by making certain criticisms upon its substance. Of these, the most important is the suggestion that the original building was a tower of the fourteenth century, to which in the fifteenth century stone curtains and out-buildings were added; that the north-east tower, which the authors have called the "keep," seems to be a sixteenth-century building whose upper storey was altered in or about the seventeenth century, and that the castle of 1282 was probably a structure of wood and earth.

As one of the authors is abroad, and the paper is required by the printer too soon after the receipt of Mr Watson's valuable criticisms to permit of any revision, the authors' original views have been allowed to stand. They were led to these views by the thirteenth-century style of the arches and mouldings connected with the curtain, which they felt unable to place as late as the fifteenth century.

Argyll and Kintyre were not under the control of the King of Scotland. In the middle of the previous century Somerled and the Norwegians divided the "Isles" among themselves after a good deal of fighting, and down to 1221 his sons and grandsons sheltered the King's enemies and made war on him from time to time as equals. In 1210 Reginald, son of Somerled, died, and Kilbrannan Sound became the boundary between his sons' possessions, Kintyre and Islay going to Donald, and Bute and Arran to Roderick. Now Roderick was a turbulent person, and his immediate neighbour might well feel safer in a solid, if small, stone tower than in a house of sods and wattles. Such a state of things, when Kintyre was in some danger from Bute and Arran, would exactly suit the requirements of the erection of a castle at Skipness, and a small tower would be the kind of castle which we should expect—not one like the large castles which great nobles, abreast of the architectural fashions of the day, were building at the same time.

The tower and chapel might thus have come into existence about 1220, if not earlier; or again, they might have been built after 1222, when Alexander II. defeated the grandsons of Somerled and gave their lands to people who had not taken their side in the war of the preceding year. Such a person might easily build a small castle as a means of securing his own person and planting his foot firmly upon land which, if secured to him by a royal grant, was yet hardly reconciled to his presence.

In 1247 the first name comes to light: it is that of Dufgal, son of Syfyn. That Dufgal lived in our tower is possible; for even in these parts private castles were now becoming common: in 1249 Eoghan, a descendant of Somerled, held four in the Treshnish islands and elsewhere of the King of Norway. In 1261 Dufgal presented the Chapel of St Columba, "close to my castle of Schepehinche," to Paisley Abbey (*Regist. de Passelet*, pp. 120, 121, quoted in *Origines Parochiales Scotiae*, vol. ii. p. 27, and in full by Captain White, *Archæological Sketches in Scotland*—"Kintyre," pp. 182, 183, Edinburgh, 1875). This is the first mention both of Skipness Castle and of Skipness Chapel; and it has long puzzled antiquaries to observe that the well-known Chapel of St Brendan is here, by a very unclerkly slip of the pen, ascribed to St Columba. But St Columba has traditional associations with Skipness; and all is explained if we suppose that Dufgal lived in the tower, and that the Chapel of St Columba was the building whose south wall is still visible in the south curtain of the castle.

At a date not very long after its first erection this original tower was enlarged by the addition of an enceinte on its south and east sides. This enceinte was so built as to include the area of the chapel and to

incorporate its south wall: the great gateway was actually built on the site of the chapel door. This shows that the demolition of the chapel was an integral part of the plan; and as the chapel belonged to Paisley Abbey, compensation was necessary. Accordingly the new and larger chapel of St Brendan was built 340 yards to the east-south-east and nearer the shore. It was a more commodious building, 82 feet long instead of 56, and in a more up-to-date style of architecture, with pointed windows and a two-light east window which belongs to the fully developed Early English style, and can hardly have been built here till after the middle of the thirteenth century.

The new enceinte began with 20 feet of curtain-wall east of the original tower, and then the wall turned south; in the angle were buildings, and connected with these a garderobe tower projected from the wall. The first-floor garderobe was reached by a mural passage from a north window, an arrangement still visible in the first-floor plan; the second-floor garderobe opened on the parapet-walk, projecting above it like a turret and pierced on three sides for archery fire. The plan at this level is shown in fig. 7. South from here ran the east curtain to the point where the south-east tower now projects, and perhaps beyond in a straight line, almost or quite joining the east end of the chapel. At the same time another curtain was built south from a new garderobe tower of similar design at the south-west corner of the original tower, and buildings behind it. The south curtain, with its gate tower, followed the south wall of the chapel, thickened and heightened into a proper castle wall. By the time the builders began work on the south-east corner, left perhaps to the last because the chapel filled the gap, they had decided to build here a tower containing good-sized rooms, which therefore made a straight join with the already built east curtain.

So enlarged, the castle had become a totally different thing; it was no longer the smallhold of a petty chief, but a fortress capable of accommodating a respectable garrison. It is necessary to consider at what time in the later thirteenth century such a change could have come about.

In 1262 a new lord came to Skipness. This was the Earl of Menteith, who appears to have been one of the most important men in Scotland. The time was one of changes. In 1236 Alexander II. had offered to buy

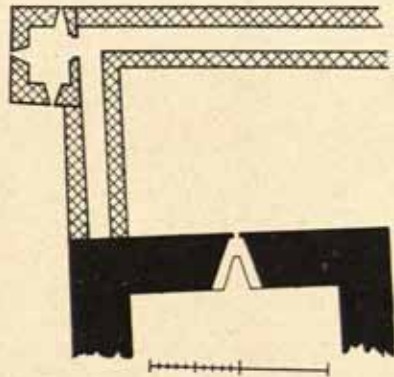


Fig. 7. North-east Corner before the present Keep was built (north to the left).

the Norwegian Hebrides, but this attempt to acquire them peaceably was no more successful than that to gain them by force in 1249, which was cut short by his death. But in 1261 Alexander III. reopened the question, at first diplomatically, then in 1262 by harrying some of the northern islands; with the result that in 1263 the King of Norway retaliated and came to grief at Largs. In the following years Alexander III. devoted his attention to organising and consolidating his conquests. A large castle built in this district late in the thirteenth century inevitably connects itself with these events; and it is natural to suggest that the King pitched on the little castle at Skipness as a place which might be enlarged and held in his interest by a powerful tenant, and selected the Earl of Menteith for this express purpose.

It is curious that no mention appears in the records of Paisley Abbey of the fact, if, as we suppose, it is a fact, that the abbey was dispossessed of the Chapel of St Columba and recompensed by the building of the new Chapel of St Brendan. That such an event should have been passed over in silence is, however, less unnatural if the change was part and parcel of a scheme carried out for reasons of high policy, and at royal command, by an exalted person who was, or appears to have been, a patron and supporter of the abbey. In such circumstances the abbey doubtless saw reason, and was induced without difficulty to accept a better chapel in place of the original gift.

Some time after this the original tower was demolished, except for its walls, and a new tower, the present keep, built in the north-east corner of the castle. When and why this was done we cannot say. But the original work of this keep, as opposed to the later additions and insertions on the one hand, and the earlier curtain, incorporated in it, on the other, suggests a date not long after the erection of the curtain, and decidedly earlier than the insertion of the square-headed windows. Probably the Earl of Menteith found the original tower for some reason inconvenient and out of date. How the new alterations were effected we can, however, say with certainty. The space between the original tower and the east curtain was enclosed by building a wall on its south side, the only one open. The second floor was laid level with the top of the curtain and the first floor inserted below; from the existing parapet-walk a mural stair was excavated downwards to connect the two, and the walls were heightened to another storey, reached by a newel stair. The battlements were not uniformly levelled but in some cases simply incorporated in the wall; and the parapet-walk, where it was not retained as a mural passage, was merely filled up, leaving a visible mark on the south face of the keep. The first and second floors were supported on corbels let into the wall, for this was less troublesome than cutting offsets; but

on the new south wall an offset was made for the first floor, and another on the east wall for the third floor, this being well above the height of the old curtain. The windows of the original tower were blocked up except where it was found convenient to adapt them to the use of the new keep; and the garderobe tower was heightened by one storey which required the insertion of an extra shoot in the storey below. Finally, the keep was no doubt crenellated and provided with a parapet-walk reached by the same newel stair. All the work done at this period appears to the authors to be thirteenth-century in style, and brings the castle to the culminating point in its history.

After about 1300 nothing seems to have been done to the castle for a long time. For this, the reason may be that during his exile Robert Bruce spent much time in Kintyre and the Isles, and when in later years he began to consolidate the power of the Crown in these parts, his local knowledge led him to choose Tarbert as the best site for an advanced base. Hence, from the time when Bruce began building at Tarbert in 1325, that castle supplanted Skipness from the position assigned it by Alexander III. in 1264, and it ceased to be a place of more than local interest, for which it was too large, and very likely fell into disrepair.

The next alterations are of a wholly new character. At some date after Renaissance models had fixed themselves in people's minds, some owner decided to convert the castle into a peaceable dwelling-house, and this he did by opening out large square windows in the keep. Two, as well as a door, were introduced into the basement, which was thus converted from a cellar into a pleasant ground-floor room, well lit but incapable of defence. Other square windows were inserted in the other rooms of the keep, extending right up to the third floor. It is significant that nothing outside the keep was touched; the other buildings, suitable enough for an earl's fortress of the thirteenth century, were useless except as farm-buildings to any humbler lord.

It remains to ask when this happened? By 1493 the Lord of the Isles appears at last to have filled up the cup; James IV. forfeited him and came down to Argyll in person to organise government. In 1494 he repaired Tarbert, garrisoned Dunaverty, and crushed any small Macdonalds who might still be giving trouble. The establishment of a new overlord at Skipness in 1495, Sir Duncan Forestare, seems likely to be connected with this policy of pacification, and is in keeping with the measures introduced in 1496 for suppressing murder throughout the kingdom. In 1499—another step, perhaps, along the same road—all charters in the west were suddenly repealed and the land put under the immediate superiority of the Earl of Argyll; the charter

which established him at Skipness (cf. *Origines Parochiales Scotiæ*, vol. ii. p. 29) is dated 1502. Skipness may have recovered some of its ancient importance in the early sixteenth century, as the regulations of 1499 specifically except North Kintyre and Islay from the rest of the lands, which were to be let on lease; and between 1513 and 1519 Skipness was in the hands of the Earl's brother. In such strong hands, and with the country pacified and in a fair way towards a new prosperity under the Campbell régime, it is not incredible that an optimistic laird may have decided to invest in ground-floor windows. It cannot have happened before about 1520, nor after 1543, when the country definitely became unsettled once more: between 1542 and 1600 there were five plundering expeditions in Argyll and Bute of sufficient gravity to find their way into history books. But between 1520 and 1543 a certain degree of peace was maintained. Alexander of Islay rebelled in 1528, but the matter was settled without fighting, and peaceful royal visits to Argyll in 1532 and 1534, and the planting of royal garrisons in Islay and at Campbeltown, led up to the "inalienable annexation" of Kintyre to the Crown in 1540—a climax which may have seemed like the inauguration of an age of peace.

Such hopes were doomed to early disappointment, and it cannot have been long before the ground-floor windows were walled up, one being significantly turned into a very convenient loophole for musketry. The only two further alterations which we have here to record are the vaulting of the basement and the addition of the gables with their attic, the corbelled parapet-walk with bartisans, and the capehouse. Both these are changes in the direction of further strength; and occasions for such changes were common enough in the late sixteenth and seventeenth centuries. Of the date of the vault nothing more can be said; it belongs, however, with absolute certainty to this period, since earlier writers in ascribing it to the Middle Ages have failed to observe that it blocks and is subsequent to a square window of sixteenth-century type (fig. 5). The gables and bartisans at the top of the keep are confidently classed by MacGibbon and Ross as belonging to the seventeenth century; and a suitable occasion for their building is after the repulse of the Macdonald invasion of Kintyre in 1615. The Earl of Argyll was then made lord of the whole of Kintyre, and as he had every reason to expect further trouble of the same kind—Macdonald of Islay and Coll Ciotach having both escaped alive—he would have been not unwise to improve the defences of Skipness. In this connection it may be observed that the castle lies conveniently on the flank of a force moving up West Loch Tarbert from Islay to attack the main stronghold of Tarbert; troops could leave Skipness in the

morning and fight the same day somewhere north of Dun Skeig with ease. Another possible occasion was in 1652, when the appointment of "six lieutenants for the shire of Argyll and Tarbert" seems to indicate an effort for stronger government. On the other hand, Montrose's invasion of Argyll in 1644 happened so quickly that no fortification could have been undertaken to meet it, and Argyll's rebellion in the covenanting interest in 1684 was an offensive movement which would not have called for defensive work in the district from which it started.

During the revolution of 1689 Argyll appears to have remained quiet, and the history of the castle here comes to an end. It was abandoned as a dwelling-house about the end of the century, and the peaceful state of the country did not demand its employment as a refuge. Late in the eighteenth century it was converted into a farm-steading, a phase of its history which came to an end within recent years, leaving it to enjoy the dignified ease of an ancient monument.

NOTE A.—BOAT-LANDING.

A block of buff sandstone of irregular shape, about 26 by 20 by 8 inches, like the stone used in the work at the castle ascribed to the seventeenth century, lies at high-water mark on the shore in the little bay marked on the O.S. map as Brann a' Phuirt, 700 yards east-south-east of the castle. (A large-scale map of the south end of this bay, contoured at intervals of 1 foot 3 inches, is appended as fig. 8.) The bay terminates southward in a steep-to rock whose top would serve as a quay along which a cart could be led, while at its edge there is water alongside for a boat drawing at least 3 to 4 feet every high tide. That it has been used as a boat-landing is shown by the fact that the bottom bears traces of artificial clearing and deepening, all large stones having been removed and a channel 1 to 2 feet deep cut in the rock, and also by the presence at the edge of the rock of three drilled holes to which boats could be moored. Such a harbour would be quite safe in the prevailing west winds, and would be dangerous only in an easterly gale; on these occasions the boat could have been brought further in round a corner of the rock, the artificial channel being prolonged in this direction, and if necessary beached where the channel runs up to dry land. It is at this point that the block of stone lies, whose preservation is due to its lying above the normal action of the tides; such a soft stone, if it lay much below high-water mark, would soon be destroyed. The stone is shown by a square mark on the plan (fig. 8), and the drilled holes by three circular marks.

The landing is one very suitable for any kind of vessel up to about 30 feet long and not exceeding 3 or 4 feet draught; its only drawback is, that it cannot be entered except at high water. It has not been used in recent times, though there is a tradition that "the Campbells," the last of whom left Skipness in 1843, kept a small yacht there and drilled the holes in the rock. But it is hardly likely that the mooring of a small yacht would have worn the holes to the extent to which they have been worn, or that so much labour would have been expended on making a landing for a yacht which was available only at high

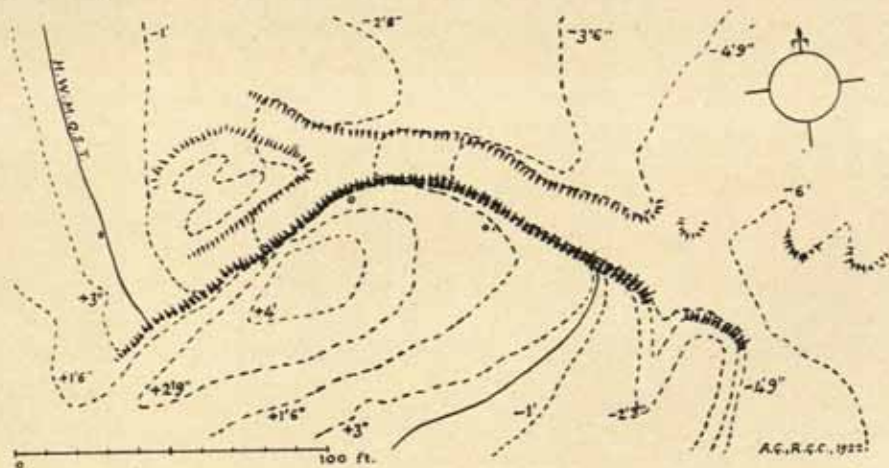


Fig. 8. Boat-landing.

water, and consequently unsuitable for pleasure sailing. It is more probable that the landing was designed for small trading craft, that could come in with the tide and discharge cargo while lying dry. The block of sandstone indicates that the landing was used in the seventeenth century for the import of building materials; but we cannot say whether it had been so used earlier, as, for instance, for the red sandstone used in the thirteenth century, which must also have come over the sea.

NOTE B.—OBJECTS FOUND.

A small number of objects have been found in or near the castle, which deserve description:—

(i) A thin slab of green slate, indistinguishable from that of Cumberland but unlike the black slate of Argyll. It was originally a circle, radius 1 foot 2 inches, but has now lost two segments, one of these having gone since it was discovered. The thickness varies between

$\frac{3}{4}$ inch and $1\frac{1}{2}$ inch. Both faces are flat and have been produced by riving; they show no sign of grinding. The edge has been knapped to its circular form by blows of a hammer delivered on both faces. The stone was found at a depth of a few inches in the floor of the keep basement. The floor deposit, consisting of gravel mixed with charcoal and broken bones, suggested a kitchen, and the stone had no doubt been used as a girdle.

(ii) A rotary quern of grey granite 7 inches high, with grinding cavity $7\frac{1}{2}$ inches in diameter. It stands on three squat feet, is unornamented and rather roughly made. The grinding-stone is missing.

(iii) A mortar of pinkish crystalline stone: height 1 foot 2 inches, diameter 1 foot 8 inches, diameter of cavity at top 1 foot 1 inch, depth of cavity in centre 9 inches.

(iv) A ball of iron $7\frac{1}{4}$ inches in circumference, weight 1 lb. 10 oz., much rusted. This was found in or near the castle at some time, but its history is not known.

(v) A pump-tree 6 feet 1 inch in length, 1 foot 3 inches in external circumference, $3\frac{1}{2}$ -inch bore. It is made of a log of Scots pine, with sapwood and bark, and was originally bound with two or three bands of iron, of which one $2\frac{1}{4}$ inches broad now remains. It was found in the well in 1898. Though much decayed, it may very probably not be more than eighty or a hundred years old.

IV.

NOTES ON THE DUIRINISH COMMUNION CUPS.

By FRED. T. MACLEOD, F.S.A.Scot.

On the 16th of June 1886 an interesting and valuable paper, entitled "Notice of Communion Cups from Duirinish, Skye (fig. 1), with Notes of other Sets of Scottish Church Plate of which Specimens were Exhibited," was read before the Society by Norman Macpherson, LL.D., Sheriff of Dumfries and Galloway, Professor of Scots Law, University of Edinburgh, V.P.S.A.Scot. The following notes are intended to be an amplification and partial correction of Professor Macpherson's contribution, and are based on information which, although available at the time, if inquiry had been addressed to the proper quarter, was not in the possession of Professor Macpherson in 1886. The only part of Professor Macpherson's paper with which these Notes are concerned is that descriptive of the Communion Cups from Duirinish, Skye, and the correction which requires to be made relates entirely to the question, not of present-day ownership, but who was the original donor of these cups and to which parish was the presentation made? In the first sentence of his paper in the *Proceedings*, vol. xx. p. 398, Professor Macpherson refers to the cups as "the Communion Cups of Bracadale," and in a footnote (p. 406) he states his reasons for concluding that the cups were gifted by Sir Roderick MacLeod of Talisker to the parish of Bracadale as follows:—



Fig. 1. Duirinish Communion Cup.

"Having first heard of the cups as belonging to Bracadale, I at once concluded that they were the gift of Sir Roderick of Talisker, which is situated in that parish. But anxious to test the accuracy of my impression, I wrote to the Lyon Office, enclosing a rubbing of the shield. I gave no information as to where it came from, nor did I say on what the arms were engraved; I merely said, 'You say Heraldry is History; if it be, tell me whose shield was this.' Lyon being

absent, my note fell into the hands of Mr Stodart. Next day I had this reply:—"The arms of which you send a sketch do not seem to be registered here, but Highlanders used to be a little irregular in their proceedings in armorial as well as other matters. I think it probable that this coat may have been borne by Sir Roderick MacLeod of Talisker, who made a considerable figure in the reign of Charles II."

Professor Macpherson's description of the cups, which he describes as of great age and remarkable form, is concise and accurate. They are recognised to be of English manufacture, with the hall-mark of 1612-13. Approaching the question of how these cups came to be used for Church purposes in Skye, he deals with the evidence furnished by the cups themselves. He says:—"Engraved on each cup are the letters S.R.M. over a shield—not a matriculated shield of any MacLeod family, but found in the Lyon Office, in the MS. known as 'Gentlemen's Arms,' and these titled 'MacLeod of that Ilk.' The castle points not doubtfully to the family of MacLeod, to which the whole of the two parishes of Bracadale and Duirinish belonged at one time, as they still do in great part; and the letters S.R.M. no doubt stand for Sir Roderick MacLeod; but there were two of that name and family: (1) the well-known Rorie More, a leading chief in the days of James VI., whose chequered career shows frequent periods of strained relations with the Government of the day. He is known, however, to have got a free pass to go to England, to have been in London for some time, and to have been knighted in 1613. He thus was in London about the very time that these cups were made. He died in 1625." In point of fact, Sir Rory Mor died in 1626. Continuing, Professor Macpherson states:—" (2) A younger son of Rorie More, to whom his father gave a long tack of the lands of Talisker, in the parish of Bracadale, he commanded a large detachment of Skye men at the battle of Worcester. He frequently appeared at the Court of Charles II. after the Restoration, and he too was knighted. The introduction of the Mackay stag's head into the arms engraved on the cups points to this Sir Roderick as the probable donor, as he married a daughter of Lord Reay, and is the only member of the Dunvegan family known to have married a Mackay."

Fortunately for a satisfactory solution of the question, we to-day are in possession of many facts which were unknown to Professor Macpherson, and these facts now fall to be stated. I take first the question of the arms on the cups, and in particular the presence of the stag's head, which, according to Professor Macpherson, pointed to Sir Roderick MacLeod of Talisker as being the donor. After an examination of these arms, Stodart could go no further than say:—"I think it probable that this coat may have been borne by Sir Roderick MacLeod of Talisker."

We to-day can go much further and say that these identical arms, including the stag's head, were borne by Sir Rory Mor MacLeod of Dunvegan. They appear on an old gourd or water-bottle which has been in the possession of the MacLeods of Dunvegan from the time of Sir Rory Mor, and is preserved to-day in the castle among the relics of

that chief. An illustration of these arms on the cups (fig. 2) and on the gourd (fig. 3) will be found in a paper read by me to the Society on 18th January 1913 (*Proceedings*, vol. xlvii. pp. 119 and 120). Above and on each side of the shield on the gourd there appear the letters "Sr. R.M." So strikingly similar is the formation of these letters on both cups and gourd that one is forced to the inference that the draughtsman was the same in each case.



Fig. 2. Arms on Communion Cup.

Professor Macpherson endeavours to explain the appearance of the stag's head on the cups by the fact that Sir Roderick MacLeod of Talisker married a daughter of Lord Reay. The true explanation is that the MacLeods of Dunvegan, for generations before Sir Roderick of Talisker married into the Reay family, bore a stag's head in their coat, MacLeod of MacLeod in fact being warden of the royal forest of Harris. Buchanan in his *Travels in the Western Hebrides*, published in 1793, refers specifically to the "King's

Forest" in Harris, and the Privy Council Records show that James III. and James V. both hunted there. On 29th June 1542 Alexander XII., chief of MacLeod, appended his seal to a charter in favour of John MacLeod, illegitimate son of John MacLeod of Minginish, and in the seal the stag's head erased is distinctly shown. The original can be seen in the Lovat Charter Chest. I do not think it necessary, in view of the above direct evidence, to labour the point of the introduction of the stag's head in the shield on the cups, but I am at least entitled to say that at most the stag's head only resembles one part of the arms carried by the first Lord Reay. Before leaving the question of the arms,

it is important to note that whereas the identical coat depicted on the cups appears on Sir Rory Mor's gourd and part of the coat appears upon his tombstone (fig. 4) in Fortrose Cathedral (*Proceedings*, vol. xlvii. p. 118), one cannot find in document, sculpture, or plate in the possession of the MacLeods of Talisker any of the arms displayed on the cups. On the contrary, it can be proved by the evidence of seals and an examination of Sir Roderick MacLeod of Talisker's tombstone in Eynort Churchyard,



Fig. 3. Arms on Gourd.

Skye (which I have made), that he never displayed any arms other than the castle.

The next point of importance to consider is the lettering S.R.M. above the shield on the cups. Here I am on equally firm ground. I can cite the authority of extant evidence. I have already referred to this lettering appearing on the gourd in Dunvegan Castle. The same lettering, subject again to the addition of the letter L—with a curious persistency in the character of the outline of the letters—appears above and below the shield engraved on the tombstone of Sir Rory Mor in Fortrose. Still more important and direct is the documentary evidence in Dunvegan Castle. In describing the gourd in the paper read by me ten years ago, already referred to, I pointed out that subsequent to receiving the honour of knighthood Sir Rory Mor always

inserted the letter "S" before his signature. There are many signatures of Sir Rory Mor preserved showing this change in the style of signing his name.

These facts are in my opinion amply sufficient to displace the probabilities which were erroneously accepted by Professor Macpherson as facts. It is only fair to the memory of a learned and enthusiastic



Fig. 4. Arms on Rory Mor's Tombstone.

antiquary to inquire into the cause of the not unnatural mistake he made. In 1617 an Act was passed ordaining heritors to provide Communion Cups for the use of the parish, the minister of the parish and his executors under the Act being made responsible for their safe keeping. The cups from time immemorial had admittedly been in the custody of the minister of the parish of Duirinish, in the parish church of which the MacLeods of Dunvegan regularly worshipped and in which they took a deep interest. The late Mr John T. Mackenzie, who was an elder of the parish church, Duirinish, for over forty years, was deputed by the Rev. Duncan M'Callum to carry the Communion Cups to Bracadale and carefully to bring them back to him after the celebration of the Communion. There are several people living in the parish who can support this statement from their own personal knowledge. The Rev. Roderick Morison, Kintail, informed Professor Macpherson of the existence of the cups which were in the hands of the minister of Duirinish, the Rev. Duncan M'Callum, and the latter, at Professor Macpherson's request, sent the cups to Edinburgh for examination and exhibition. Professor Macpherson's own statement

is:—"Having first heard of the cups as belonging to Bracadale"—his informant being the Rev. Roderick Morison. From that moment his efforts were directed, not towards discovering the accuracy of the information given to him, but towards finding evidence on the cups themselves to support Mr Morison's mistaken view. The presence of the stag's head and the fact of the marriage into the Reay family quickly led the learned professor to make a serious but very simple and natural slip.

The life history of Sir Rory Mor—ample details of which remain to us in the old documents in Dunvegan Castle—entitles one to say with some assurance that if one were left to the consideration of probabilities the weight of such evidence would be entirely one-sided. Sir Rory Mor

occupied the position of Chief from 1596 to 1626. He took the greatest possible interest in the welfare of the people in the parish of Duirinish, and regularly attended the Church of St Mary (Duirinish) and took an interest in the ecclesiastical affairs of the parish. He received the honour of knighthood in London in the year 1613, the date of the hall-mark on the cups. It is highly probable that on his return to Skye he brought with him the cups for presentation to the parish of Duirinish for the use of the church he worshipped in. Whether or not there is any connection between the gift of these cups to Duirinish and the agreement entered into by him and others in 1622 to build and repair the parish churches at the sight of the Bishop of the Isles, I cannot say, but a connection is possible.

On the other hand, we have practically no knowledge of any interest Sir Roderick MacLeod of Talisker took in Church matters, and he did not receive the honour of knighthood until thirty-five years after Sir Rory Mor's death. We are entitled to assume that the lettering on Sir Rory Mor's tombstone in Fortrose was carved within a few years of the date of his burial. We are also entitled to assume that the lettering on the gourd was put on for purposes of identification during Sir Rory Mor's life. We therefore have this identical lettering intimately associated with Sir Rory Mor for the period of at least thirty-five years, during the whole of which Sir Roderick of Talisker had no right to prefix to his initials the letter "S."

In the above circumstances, and for the reasons stated, I think it right to put on record in the *Proceedings of the Society* my belief, as opposed to that of Professor Macpherson, that Sir Rory Mor MacLeod of Dunvegan was the owner of the cups in question; that he gifted them to the parish of Duirinish for the use of the Church of St Mary between the years 1613 and 1626; that the cups have since remained in the custody of the incumbent of that parish, and that they have never been in the custody of the incumbent of the parish of Bracadale, except when occasionally lent on occasions of Communion.

MONDAY, 14th May 1923.

BRIGADIER-GENERAL R. G. GORDON-GILMOUR, C.B.,
C.V.O., D.S.O., in the Chair.

A Ballot having been taken, the following were elected Fellows:—

Miss ALICE BALFOUR, Whittingehame, Prestonkirk, East Lothian.

EVAN MACLEOD BARRON, Proprietor and Editor of *The Inverness Courier*,
Oaklands, Inverness.

ARTHUR NICOL BRUCE, W.S., 10 Coates Gardens.

Sir JOSEPH DOBBIE, 10 Learmonth Terrace.

Rev. WILLIAM DUNLOP, M.A., St David's Manse, Buckhaven, Fife.

Rev. MURDO KENNEDY M'LEOD, M.A., 10 Overdale Villas, Langside,
Glasgow.

GEORGE MILNE, Craigellie House, Lonmay, Aberdeenshire.

WILLIAM WHYTE, P.O. Box 1831, Johannesburg, S. Africa.

There was exhibited by Mrs A. E. Nelson, F.S.A.Scot., an Iconographical Ring of gold found in Nottingham. It had a double-twisted shank, with shoulders deeply engraved with four cinque-foiled flowers and leaf-work. On the heart-shaped bezel was engraved a demi-figure of St Christopher supporting our Lord on his back, represented as a child, bearing in His left hand an orb, whilst bestowing His blessing with His right. On either side were rays of light. The date of the ring was about the middle of the fifteenth century. It was no doubt worn as a talisman, since any one who had looked upon the figure of the saint was from that day believed to be immune from sudden death.

The following Donations to the Museum were intimated, and thanks voted to the Donors:—

(1) By Captain IAIN RAMSAY of Kildalton.

Roughly dressed Cross-slab, $27\frac{1}{4}$ inches by $7\frac{1}{4}$ inches by $1\frac{1}{16}$ inch, bearing on one face an incised cross, $12\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, the top and bottom arms being equal in length, as also the side arms; found face downwards under the base of the great cross of Kildalton, Islay. (See Graham's *Carved Stones of Islay*, p. 83.)

Cross-slab of rectangular shape, rounded at the top, 27 inches by $9\frac{1}{2}$ inches by 3 inches; at the top of the face is an equal-armed Latin cross

within a circle; found at the remains of the Chapel of Kilbride, Islay. (*Op. cit.*, p. 76, No. 77.)

Fragment of the head of a free standing Cross, the arms formed by hollows cut through the stone at their intersection, $13\frac{3}{4}$ inches by $13\frac{3}{4}$ inches by $2\frac{3}{4}$ inches; on the face is an equal-armed, voided cross crosslet; on the back has been another cross, the details of which are now indeterminate; from Islay.

Cross-slab, 3 feet 4 inches by $14\frac{1}{2}$ inches by $7\frac{1}{2}$ inches, with rudely formed cross on the face, there being hollows at the intersections of the arms which are joined by a circle; above the side arms are representations possibly of the Sun and Moon; on both sides of the shaft are upright lines, with cross interlacing and scroll-like terminations at the top from Doid Mhari (Mary's Croft), near Port Ellen, Islay. (*Op. cit.*, p. 96, No. 107, pl. xxx.)

Fragment of the mutilated head of a free standing Cross, with discoidal head and side arms projecting slightly; on the front is a crucified figure, from the waist upwards; between the arms of the cross to which the figure is nailed are the remains of interlaced work; on the back of the slab can be traced the remains of a cross with circles at the intersections of the arms, and the remains of what seems to have been interlaced or foliaceous work on the shaft, 17 inches in length, $14\frac{1}{2}$ inches in breadth, $4\frac{1}{2}$ inches in greatest thickness; from Islay.

Larger portion of Cross-shaft and Plinth, from island of Texa, Islay—Shaft of Cross, 3 feet $7\frac{1}{2}$ inches long, 13 inches broad at the base, $3\frac{3}{4}$ inches in thickness, tapering towards the top; at the foot, in front, is the figure of a knight in high relief, with conical basinet, camail and quilted jupon, his left hand clasping the sheath of his sword, which hangs obliquely from his sword-belt, the buckle showing; in his right hand is a battle-axe; above is the inscription HEC : E/ ST : CR_U/ X : REG_N/ ALDI_{JO}/

HIS/ DE ISLA. Above the inscription are the remains of what may have been a cross or crucifix with foliaceous designs on either side of the shaft. On the back at the foot is a galley with mast and sail, with a human figure in the bow and one in the stern. Above is a hunting scene consisting of two dogs pulling down a stag. Higher up is a foliaceous design. Plinth of Cross, which has been broken and reconstructed, 23 inches by 23 inches by $12\frac{3}{4}$ inches; on the top are two female figures, one with hands crossed, the other with one hand raised. (*Op. cit.*, p. 95, Nos. 103 to 105, pls. xxix. and xxx.)

Grave-slab, $33\frac{1}{2}$ inches by $19\frac{1}{2}$ inches by 2 inches, broken at the top, showing an ecclesiastic in a niche with a richly ornamented chasuble, holding a chalice with both hands; round the edge is a mutilated

inscription with rosettes at the corners; in the angles above the niche are two trefoils, and above this are the remains of a floriated design; from Islay. (*Op. cit.*, p. 95, No. 102, pl. xxix.)

Top Stone of a Quern, of schist, $12\frac{1}{2}$ inches in diameter, with a three-armed cross on the top and partly perforated holes for the handle between the arms; from Islay.

Pot Quern, $10\frac{3}{8}$ inches in diameter, 4 inches in height, with the lower stone showing a central perforation for a spindle and side perforations for the disposal of the ground material. The top stone shows a large, partially perforated hollow for the handle, and three smaller ones placed equally apart; from Islay.

Socket-stone, formed from a water-worn pebble, $5\frac{1}{4}$ inches by 4 inches by $2\frac{5}{16}$ inches, with socket worn on one side only; from Islay.

Crusie Mould of red granite, $16\frac{1}{2}$ inches by 11 inches by 8 inches, with a matrix on the top side; from Islay.

Peat Saddle of wood; from Islay.

Wooden Plough, incomplete; from Islay.

Cas Chrom or Foot-plough of very large size; from Islay.

(2) By Messrs WILSON & SHARP, Goldsmiths, 139 Princes Street, through ANDREW SHARP, F.S.A.Scot.

Oval Mounting of brass for a casket, inlaid with eight Scotch pebbles, made in Edinburgh.

(3) By Rev. A. A. MILNE, F.S.A.Scot.

Fire-marks of the Sun Insurance Co. and the Scottish Union Insurance Co.

(4) By J. GRAHAM CALLANDER, F.S.A.Scot., Director of the Museum. Edinburgh Farthing, Atkins, 112.

(5) By H.M. OFFICE OF WORKS.

Globular Jar of reddish ware, $14\frac{1}{4}$ inches in height, $8\frac{7}{8}$ inches by 8 inches in external diameter at the mouth which is oval, $14\frac{1}{4}$ inches at the bulge, $7\frac{1}{2}$ inches at the base; Pitchers of black ware covered with green glaze, (a) $14\frac{1}{2}$ inches in height, $3\frac{1}{2}$ inches in diameter at the mouth, $10\frac{1}{2}$ inches at the widest part, $5\frac{3}{8}$ inches at the base; (b) $12\frac{1}{4}$ inches in height, $4\frac{1}{2}$ inches in diameter at the mouth, 9 inches at the widest part, and $4\frac{3}{4}$ inches at the base; both imperfect and restored; found while excavating for foundations for houses at the Royal Naval Ordnance Depôt, Bandeath, near Stirling; part (less than half) of a Domed Waterpot of reddish ware with a yellow-green glaze, $8\frac{1}{4}$ inches in

height, $7\frac{7}{8}$ inches in diameter at the shoulder, $4\frac{3}{4}$ inches at the base; found at Melrose Abbey; fragments of hand-made Pottery from the Broch of Mousa, Shetland.

Glass Bead, two perforated stone Discs, seven stone Whorls, piece of worked Whalebone and fragment of Antler; from the Broch of Dun Troddan, Glenelg, Inverness-shire. (See *Proceedings*, vol. lv. p. 92.)

(6) By Miss JANE L. FINDLAY, 12 Rothesay Terrace.

Necklace made from "watch-cocks" or balance covers of old verge watches, a circular silver Brooch, and a silver Luckenbooth Brooch.

(7) By Captain H. W. MURRAY, F.S.A.Scot., F.S.A.

Six palæolithic pointed Implements and Flakes of chert-like stone and two of flint; from the caves at Roches Rouges, Mentone.

Silver Ring-brooch, said to have been found in Dingwall.

(8) By Ex-Provost W. S. GEDDIE, Fortrose.

Bottle Stamp or Rondel from an old wine bottle inscribed AH/FORTROS/ 1751.

(9) By Lt.-Col. M. R. CANCH-KAVANAGH, late of the Black Watch, Grimblethorpe Hall, Lincoln.

Medal of the Beggars Benison Club, with green silk ribbon, dated 5826.

(10) By LUDOVIC M^cL. MANN, F.S.A.Scot.

Plaster Casts of two axe-hammers from Lawfield, Kilmalcolm, Renfrewshire, and the Fossil Grove, Whiteinch, Glasgow; and of two stone Hammers, one from Kidsdale near Whithorn, Wigtownshire, and the other also found near Whithorn. (See previous communication by the Donor.)

(11) By Miss A. HOWIE, 23 Richmond Terrace, Aberdeen, through A. J. H. EDWARDS, F.S.A.Scot., Assistant Keeper of the Museum.

Snuff-mull of horn, $4\frac{1}{2}$ inches long, with a plug lid, and the head of a hippopotamus carved at the narrow end.

The following Donations to the Library were intimated:—

(1) By the DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.

The Cleaning and Restoration of Museum Exhibits: Second Report upon Investigations conducted at the British Museum. London, 1923.

- (2) By THOMAS SHEPPARD, M.Sc., F.G.S., F.S.A.Scot., Curator of the Hull Museum.

Hull Museum Publications, Nos. 8, 131, 132, viz.—

Hull Coins and Tokens (2nd edition). By W. Sykes.

Record of Additions, No. lxiv.

Old Farming Methods in East Yorkshire. By the Donor.

- (3) By the MASTER PRINTERS' GUILD, Aberdeen.

Record of the Celebration of the Tercentenary of the Introduction of the Art of Printing into Aberdeen by Edward Raban in the year 1622.

- (4) By Captain H. W. MURRAY, F.S.A.Scot., F.S.A.

English Architecture at a Glance. By Frederick Chatterton, F.R.I.B.A. London, 1923.

- (5) By E. K. CARMICHAEL, M.C., Teanroit, Beauhy, the Author.

The Elements of Celtic Art.

- (6) By Rev. J. KING HEWISON, D.D., F.S.A.Scot., the Author.

The Runic Roods of Ruthwell and Bewcastle, with a short history of the Cross and Crucifix in Scotland. Glasgow, 1914.

- (7) By CHARLES E. WHITELAW, I.A., F.S.A.Scot., the Joint Author.

European Hand Firearms of the Sixteenth, Seventeenth, and Eighteenth Centuries. By Herbert J. Jackson; and with a Treatise on Scottish Hand Firearms by the Donor. London, 1923.

- (8) By JOHN RUSSELL, F.S.A.Scot., the Author.

The Story of Leith.

The purchase of the following Book for the Library was announced:—

Dictionnaire d'Archéologie Chrétienne et de Liturgie. Cabrol. Tome V. Deuxième Partie.

The following Communications were read:—

I.

BRONZE AGE SHORT CISTS NEAR DUNFERMLINE, FIFE. By J. GRAHAM CALLANDER, F.S.A.Scot., DIRECTOR OF THE NATIONAL MUSEUM OF ANTIQUITIES. WITH A REPORT ON THE BONES FOUND, BY PROFESSOR THOMAS H. BRYCE M.D., F.R.S., F.S.A.Scot.

Towards the end of last year (1922) a small group of slab-lined graves was discovered in Ferniehill sand-pit, which lies on Primrose Farm, about $\frac{1}{4}$ mile east of the hamlet of Pettymuir and about $2\frac{1}{2}$ miles south-south-east of Dunfermline. The site lies on the summit of a sandy ridge rising slightly above the 100-foot contour-line, and from it a glimpse of the Firth of Forth beyond the naval base at Rosyth is obtained. The immediate surroundings consist of fertile undulating country rising gradually to the north.

When the first grave was discovered the character of the structure was not recognised, as there were no relics or traces of human remains, and the slabs of which the cist was formed were removed as they came to light: the workman who was digging the sand thought he had come on an old drain. But when the second cist was encountered, fragments of a human skull having been observed after the removal of the cover-stones and of some of the sand in the chamber, it was realised that the structure was a grave. Further work about the cist was suspended, and the discovery was reported to Mr William Black, Charlestown, and Mr Peter Paterson, Dunfermline, the chief proprietors of the sand-pit. Mr Black having notified the discovery to the Museum, it was arranged that no further digging should take place until I could be present. On the 4th November I visited the site and had the grave cleared out.

The first grave had been formed of two side slabs measuring 3 feet 6 inches and 3 feet 3 inches in length by 1 foot 3 inches in breadth, and two smaller end slabs which had been broken up. The approximate position of the cist was pointed out, but no further details regarding it were obtainable. It was evident, however, that the grave had been about 3 feet in length and about 15 inches in depth.

The second cist lay about 12 feet south-east by south of the first in fine yellow stratified sand. The tops of the side and end slabs were 4 feet below the surface of the ground, there being about 2 feet 9 inches of sand and 1 foot 3 inches of soil above them. This grave, like the first, was formed of rough slabs of yellow sandstone set on edge, the stones varying from 3 inches to 5 inches in thickness. The ends and the north-eastern side were each formed by a single slab, but the south-western

side consisted of two. Internally the chamber measured 3 feet 2 inches along the north-eastern side, 3 feet 1 inch along the south-western side, 1 foot 10 inches across the north-western end, and 1 foot 9 inches across the south-eastern end, the depth being 1 foot 9 inches. The slabs fitted closely together at the corners, and a small prismatic stone had been inserted at the southern corner. There were three cover-stones about 4 inches thick; the largest, which almost covered the mouth of the grave, measured 3 feet 1 inch in length by 1 foot 11 inches in breadth, and the other two, which overlapped the ends of the central slab, measured 2 feet 3 inches by 14 inches and 1 foot 8 inches by 1 foot 7 inches respectively. The bottom of the grave was not paved in any way, and the longer axis lay 35° west of north magnetic, nearly north-west and south-east.

When opened, the cist was packed full of sand, which was of darker colour than the undisturbed sand of the pit. Portions of a human skull and lower jaw were found near the centre of the north-western end of the grave, and a left humerus and rib bones near the northern corner. Close to the middle of the south-western side were part of the lower jaw of another individual, and fragments of long bones, which included a left femur and tibia. Dr Robert C. Wallace of Charlestown, who was present while the grave was being examined, remarked that the two latter bones as they lay side by side, cleared of sand, seemed to have been disarticulated when deposited. Fragments of bone were found near the centre of the cist but none towards the south-eastern end. Most of the bones were much decayed and very friable.

From the report on the bones by Professor Bryce it will be seen that two persons had been buried in this grave, one probably a woman of full adult age and the other a young person of whom the sex could not be determined. It would appear that the elder individual had been placed on her right side with the head in the north-west end of the cist, and the knees flexed, possibly disarticulated, against the south-western side, and that the left arm had fallen behind the spine as the body decayed. The skull of the younger person lay near the centre of the south-western side, but as the position of the other parts of this skeleton could not be ascertained it was impossible to determine its original position.

An unworked chip of flint and a few fragments of charred wood were the only other relics found in the grave.

Ten days later I was called out to examine a third cist, which had been found about 5 feet south-east of that last described. When I arrived at the spot the cover-stones had been exposed, but no further

disturbance of the deposit had been permitted. The tops of the covers of this grave were 1 foot nearer the surface than those of the last, there being only 2 feet 6 inches of sand and soil above them. The mouth of the cist was closed with four irregular rough slabs covering a pentagonal-shaped area measuring 4 feet 9 inches from east to west and 3 feet 11 inches from north to south, the two on the north side being only about 10 inches in breadth. A gap between these and the larger two on the southern side was closed by two smaller stones superimposed on the four below, and near the north-eastern corner was a block of shale measuring 12 inches by 9 inches by 4 inches. The removal of the cover-stones revealed a beautifully constructed cist, of almost rectangular shape, formed by four slabs set on edge. The longer axis of the grave lay 62° east of north magnetic, almost north-east and south-west, and it measured internally 3 feet in length along both sides, 2 feet in breadth across both ends, and 1 foot 3 inches in depth: like the last, it was neither paved nor causeyed except for a flat triangular stone, about 1 foot across, which lay near the centre of the western side. All the stones of this cist, except the block of shale, were of yellow sandstone, and the side and end slabs varied from 2 inches to 6 inches in thickness.

This cist was also chock-full of dark-coloured sand, which was carefully removed. To our disappointment not a trace of osseous remains was revealed and no relics were found, but several specks of charred wood were seen amongst the sand in the cist.

Although no pottery or other humanly fashioned relics were found in any of the three graves, there is little doubt that they belong to the early part of the Bronze Age. It would not be surprising if further cists should be found in the same sandy ridge.

REPORT ON THE BONES FROM THE SECOND CIST.

By Professor THOMAS H. BRYCE.

The bones from Ferniehill cist represent the fragmentary remains of the skeletons of two individuals, the one of full adult age, the other a young person. The deposit consists of some fragments of the bones of the skull, portions of two lower jaws, pieces of a few vertebræ and ribs, and detached parts of the articular ends and shafts of the long bones. The number of long bones represented falls far short of the full complement of bones even of one skeleton, and no part of the pelvis is present. The fragments of the long bones that do exist are all rather delicate, so that it is not possible to say to which of the two skeletons they belong, except in cases where the articular ends are attached.

The majority of the fragments can be assigned to the elder individual. The two largest pieces of skull belong to a right parietal bone and the right side of a frontal bone. The sagittal suture has entirely disappeared on the inner aspect of the parietal fragment. This fact and the thickness of the bones indicate that the skull belonged to the elder of the two persons. A small portion of the alveolar process of the upper jaw with the last molar tooth in its socket, and a fragment of the lower jaw with the molar teeth in position, must also be referred to this individual, because the teeth show a good deal of wear, the crowns being ground flat.

A portion of the shaft of the humerus with the head attached, fragments of the articular ends of the femur and tibia, which show no signs of the epiphyseal junction, also represent a person of full adult age. The left tibia of this individual consists of two portions, a proximal and a distal, which fit one another, and when the two fragments are conjoined the reconstructed bone measures 36 cm. or 14.2 inches. This figure, according to Pearson's formula, would correspond to a stature of 5 feet 2 inches in a woman and 5 feet 4 inches in a man. The relatively low stature and the comparatively delicate character of the bones justify the supposition that the person was a woman, although in the absence of any part of the hip bones it is not possible to determine the sex absolutely. The lower end of this tibia shows a well-marked facet on its anterior aspect, produced presumably by pressure on the neck of the astragalus in acute flexion of the ankle. This occurs regularly among the races of mankind who adopt the attitude of "squatting," but is sometimes seen even in modern European bones. The femora are too imperfect to yield any data regarding stature, and none of the other fragments that can be assigned to this skeleton furnish any further information.

In the case of the skeleton of the younger person, the decisive fragments are the detached proximal epiphysis of the right humerus and portions of the lower jaw. The upper humeral epiphysis unites with the shaft of the bone between the twentieth and the twenty-second year of life, so that this is the upper limit of the age of the individual. The lower jaw is small and its body is shallow. The third molar or wisdom teeth have not erupted; this fact further determines the age of the individual, or would determine it were the dentition normal. As a matter of fact, the crown of the third molar, which at this stage should be present but still inclosed within the alveolus, is absent on both sides. Notwithstanding this circumstance, the general character of the jaw and the fact that the teeth show no signs of wear indicate that the person was still young. The jaw, in short, may very well have belonged to an individual in whom the ossification of the long bones was not complete.

II.

THE DEUCHNY HILL FORT—THE CHALMERS-JERVISE PRIZE
ESSAY. BY R. R. BOOG WATSON.

The site to be considered forms the highest point of what is rather vaguely marked on Ordnance Survey Maps as Deuchny Wood, and lies to the north-east of Kinnoull Hill and about 2 miles from the Cross of Perth. The Survey sheets give no details of height above the contour-line of 700 feet, but actual levels have been taken and the highest point is 760 feet above Ordnance datum.

Kinnoull Hill (728 feet) and Deuchny Hill form the west end of the range of hills which form the Braes of the Carse, among which are such fortified hilltops as at Pole Hill and Evelick.

Viewed from the west, Deuchny Hill has the appearance of a truncated cone, but from south or north it is elongated, and consists of three well-defined heights rising in level from the west end.

Both to the north and south are swampy hollows, beyond which the ground again rises, but nowhere attains the height of the eastmost top. This height commands a very extensive outlook: eastwards, the Carse of Gowrie and as far as the Bell Rock light; southwards, from St Andrews Bay and over Fifeshire; westwards, Strathearn and to about Tyndrum; northwards, the valley of the Tay, Strathmore, and the Grampians. Only to the north-east is the view cut off by Murrayshall Hill. So prominent is the site that it was selected for the Peace Celebrations bonfire, and it was this circumstance which redirected my attention to it. I had at an earlier time noticed what seemed to be traces of a wall, but having examined the Ordnance Survey Maps and finding no indication of any site, I had concluded that either I was mistaken or the remains were quite modern. When, however, a small stone mortar was brought to the Perth Museum as having been found on the site of the bonfire, I was led to re-examine the site. Through the kindness of the Right Hon. The Earl of Moray permission was obtained to examine and survey the ground, and to him I have to express my thanks both for the permission and continued interest. From Mr Wilson, factor on the Kinfauns Estate, I learned that the hill had been planted out some eighty years ago. This may account for the highest part of the ground not being indicated on the Ordnance Survey Map; a young plantation is often difficult to survey on account of the closely planted trees. Mr Wilson informed me that this hill bore on the estate records the name of Grassy Law.

north-west and east-south-east, and measures 96 yards in length and 44 yards in width about the centre. The entrance or gateway is at the south-east end; here the foundations of the rampart are more distinct. The wall on the north side seems to have been returned for a short distance inwards. The approach to the entrance is well marked by large stones at irregular intervals. Some 10 feet from the entrance is the only sign of the rock having been worked into, as on both sides of the path it has been removed either to smooth the approach or possibly to form a step as a trap for an enemy. Towards the foot of the slope and about the end of the ditch or protected way are fairly large stones which seem as if placed to break up any concerted rush against the entrance.

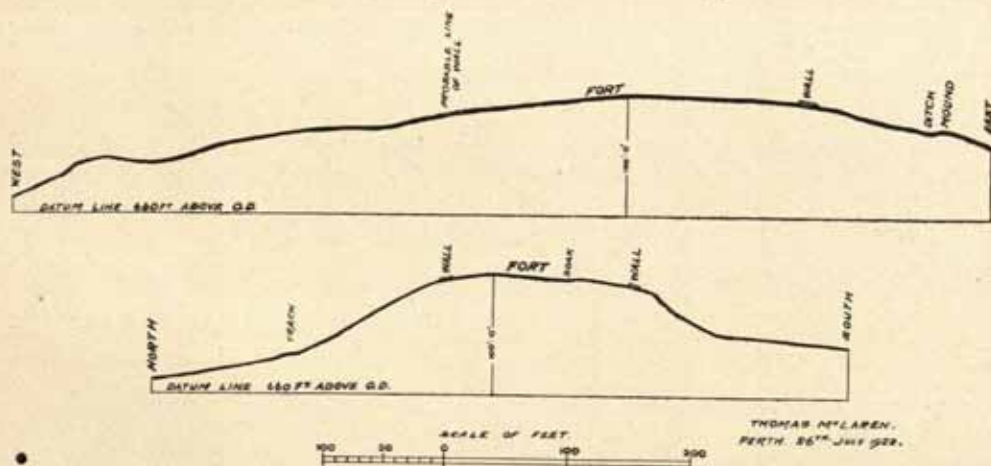


Fig. 2. Sections through Fort on Deuchny Hill.

The ditch or protected way runs below the east end of the fort and turns along the north face of the hill, but at one place (shown on the plan) the hill seems to have slipped and filled the ditch. At this point are a considerable number of water-worn boulders, which may either have been from the wall above or have been part of an additional fortification; while further along this north side there seems to be a track with stones on either side, but as this line was used for hauling the timber these may have been only recently moved.

On the south side is a somewhat similar track, which runs up the hill to one of the breaks in the line of rampart, and which certainly was used for the removal of timber.

The fort, as stated, occupies the plateau on the highest part of the hill.

The east end was protected as already described. On the north and

south the banks fall away very steeply, at some parts precipitously, and beyond these slopes are considerable swampy areas. The west end, however, where the two lower heights break the slope, seems to have had additional ramparts, as two lines of stones seem to curve across the middle hill and reach what may have been an access indicated by a double line of stones.

There is no indication of any water supply, unless it be one or two places where there seem to be earth-filled hollows; two of these are on the highest plateau and were untouched when the hill was burned. During wet weather I tried the depth with a walking-stick and was able to go down some 15 or 18 inches; on withdrawal of the stick the hole at once filled with water. Before the removal of the timber, about $\frac{1}{4}$ mile north-east and much lower down was a spring, which is marked on the Ordnance Survey map. Mr Wilson tells me that on the estate plans this spring is marked as the Butter Well, and was famous for its water. Since the cutting of the timber it has dried up. Below this spring was a bank covered with spruce firs, which was called, according to an old man of the district, the "Rostle Bank." I have the name only phonetically, and the present generation have lost it.

Further to the south lies what Mr Wilson informs me is given on the estate plans as the "Whisky Riggs March."

Besides such artifacts as I have found in or about this fort and the small stone mortar presented to the Museum by Mr J. Henderson, there was a flint lance-head found some 500 yards to the north-east, on the end slope of the rising ground over the northerly swamp.

I am indebted to the Right Hon. The Earl of Moray and his factor, Mr J. G. Wilson, for the valuable assistance they have given me, to Mr J. Ritchie, Curator of the Museum, Perth, for providing the photographs submitted, and to Mr Thomas M'Laren, Burgh Surveyor, Perth, for invaluable aid in surveying and plotting the plans and sites.

ARTICLES MARKED ON PLAN.

- A. Stone mortar made of andesite, found by Mr J. Henderson on site of bonfire. Size, 3 inches by $1\frac{1}{4}$ inch; hollow, $2\frac{1}{2}$ inches by 1 inch. Perth Museum No. 2164.
- B. Hammer-stone, white quartzite, cheese shape, 3 inches to $3\frac{1}{4}$ inches by 2 inches, No. 2219. Much battered on edge. Found to south-east between entrance and east soak.
- C. Hammer-stone, grey quartzite, pear shape. Battered on small end. Size, $6\frac{1}{2}$ inches by 4 inches by $3\frac{1}{4}$ inches. Found on north slope.
- D. There is another hammer-stone, granite, which has been split, and was found in two portions about 6 feet apart (but still fitting), which is

still on the hill. It is much the same as the large pear-shaped grey quartzite one.

- E. Jet fragment, seems to be piece of armlet. Outside curve $1\frac{1}{2}$ inch in length, inside $1\frac{1}{4}$ inch, width $\frac{5}{8}$ inch, thickness $\frac{1}{2}$ inch. The sweep of this fragment would indicate a ring of some $3\frac{3}{4}$ inches in diameter outside and $3\frac{1}{2}$ inches inside. Found beside a hearth on north wall. Perth Museum, No. 2294.
 - F. and G. Flint and chalcedony, flaked, found on steep slope to south-east outside.
 - H. Two crystals with seemingly worked ends, and a piece of seemingly worked reddish quartz found on talus below the last two.
 - K. Piece of stone, seemingly semi-vitrified, from hearth at east end of fort. The upper surface shows fire action, while the lower, which was buried in earth, is untouched.
 - L. Pieces of vitrified stone, almost slag, found 24 yards north-west by north from highest point.
 - M. Four small pieces of calcined bone from slope on south.
- All these are indicated on the plan prepared by Mr M'Laren.

III.

NORSE HERALDRY IN ORKNEY. BY J. STORER CLOUSTON, F.S.A.Scot.

The interesting paper by Captain Norton Traill in the last volume of the *Proceedings*, containing references to a couple of earlier papers by myself,¹ calls for little comment from me, since on most points we are agreed. There are, however, one or two matters concerning which I may perhaps be permitted to make a very brief reply.

With regard to the slab bearing the arms of Flett impaling Tulloch, I do not think Captain Norton Traill is correct in reading the central charge as a crescent and not a drinking-horn. Fig. 3 in my first paper shows its shape exactly, and it does not seem possible this can ever have been a crescent. As to the initial letter F, Captain Norton Traill's own drawing (fig. 17) shows an upward curve of the upper arm inconsistent with the hypothesis that it is an altered B; while the position rather to the left of the panel is simply due to the outer ends of the arms having flaked partially away. I re-examined this slab very carefully and feel certain this letter was never anything but F. Moreover, a theory of later alteration ought to have some definite *facts* to prompt it, and I cannot see that Captain Norton Traill really offers anything beyond suggestions as to how a supposititious alteration might conceivably have come about.

¹ *Proceedings*, vol. lii. p. 182, and vol. liii. p. 180.

My reasons for suggesting a date for this slab in the early sixteenth century were, firstly, the absence of any inscription, which points decidedly to a date before the middle of that century; secondly, the presence of the stepped cross, a feature characteristic of early slabs and only infrequently found later; and thirdly (though this indication is less trustworthy), the shape of the shield, which suggested to me a half-way stage between the straight-sided fifteenth-century shields and the more elaborate kind in vogue afterwards. One cannot be perfectly sure, but unless some evidence to the contrary appears, my opinion of its age must remain unchanged.

The question of whether the Fletts actually bore arms at the date of this slab leads to the main point raised by Captain Norton Traill—the origins (other than Scottish) of arms-bearing in the Orkneys. In this matter I am now decidedly inclined to agree with him that the source of authorised arms in the islands was Norwegian. As explained in the previous papers (his and my own), the usage of arms was very definitely confined in Norway to members of the king's "hird," i.e. his liegemen, a body who may not inaptly be described as a kind of semi-feudal bureaucracy.¹ They were, however, to be found all over the Norse colonies and dominions, usually holding office of some sort. For instance, in 1307 the *handyngenna menn* (liegemen) and logretta-men of Shetland issued a decree,² and the twelve men mentioned by name (including the lawman) may be assumed to be liegemen, since the words "and all the logretta-men" follow this list. Two of their seals survive, and both are heraldic.³ Again, two grants of arms to men in Iceland, both hirdmen, are recorded in 1450 and 1457.⁴

Coming to Orkney, it is certain that the lawman was a royal official and a member of the hird,⁵ and out of over forty different lawmen's seals shown in *Norske Sigiller* (which covers from 1286 to 1377), all are heraldic but four.⁶ Of these four, two are very early (1299 and 1304), and show heraldic-looking charges without shields, another is apparently a signet rather than a seal, and the fourth is described as "indistinct and doubtful"; while of five fifteenth-century lawmen about whom I can find definite information, all were armigers.⁷ Among the early Orkney

¹ Some of the greater Church vassals also bore arms (*Norges Bonder*, Johnsen, p. 86).

² *Records of the Earldom of Orkney* (R.E.O.), No. XXIX.

³ *Ibid.*, p. 385, seals Nos. 4 and 5.

⁴ *N.G.L. Statens Lovgivning*, 1448-82 (Taranger), Nos. 32 and 75.

⁵ *Udsigt over den Norske Rets Historie* (Taranger), part i. p. 42. With regard to Orkney in particular, see also *Exchequer Rolls* for 1476, where the Orkney lawman is described as "legifero domini regis," and his salary is paid out of the royal exchequer. See also *Statens Lovgivning*, 1448-82, No. 103:—a summons in 1466 from the King of Norway to the lawman of Orkney demanding his immediate attendance to discuss certain matters (not specified in the missive).

⁶ Nos. 9, 37, 279, and 847.

⁷ *N.G.L. Statens Lovgivning*, 1388-1482.

coats of arms shown in my first paper, it may be recalled that one was on the lawman's seal in 1425, and that the armorial family of Paplay seemed very probably to be descended from lawmen. (It may be added that the Orkney lawmen were at the same time always members of one or another of the chief landed families in the islands—with the exception of one Shetlander appointed by the Scottish crown.)

During Norwegian times the bailies or *ballivi* of Kirkwall were also royal officials,¹ and we find John Haraldson described as bailie of Kirkwall in 1438 and as armiger in 1434²—a very interesting and decisive bit of evidence with regard to arms-bearing by these functionaries, or at all events by some of them. In 1422 the lawman, two canons, and four citizens of Kirkwall issued a testimonial in favour of James Craigie (also, by the way, a "manucaptus" or hirdman of the king), and all seven appended their seals.³ It may safely be assumed that some at least of these representative citizens were bailies; indeed, as Kirkwall had four bailies, it looks as if they were the four;⁴ particularly since the seals appended at Kirkwall from that time onward, till near the close of the sixteenth century, were almost entirely those of the higher churchmen, higher officials (such as justice, lawman, sheriff, etc.), and of the bailies of Kirkwall.⁵

The names of the four in 1422 were John Magnusson, William Irving, Peter Paplay, and Walter Andresson. Three years later the complaint addressed by the community of Orkney to the King of Norway⁶ was sealed by the same lawman, Kolbein Flett, John Magnusson, and William Irving; which makes the presumption that these last two were bailies very strong indeed. And if they were, Kolbein Flett, who comes before them, must surely have been too.

¹ *R.E.O.*, No. XXII. See also *Scots. Hist. Review*, January 1923, "The Office of Sheriff in Scotland" (C. A. Malcolm), p. 140, for similar position of town *ballivi* as royal officers in Scotland.

² *Ibid.*, Nos. XX. and XXX.

³ *Ibid.*, No. XVI.

⁴ See Royal Charter of Burgh and City of Kirkwall, 1486, printed in *History of the Church in Orkney*, vol. I. (Archdeacon Craven, D.D.). As this charter confirms the ancient Norwegian "privileges, liberties, immunities, and others whatsoever" of the Burgh, and specifically describes itself as "this present confirmation," it may pretty safely be taken that the four bailies it refers to were the earlier number also.

⁵ The "Diploma of the Succession to the Earldom of Orkney," 1448 (*Bannatyne Miscellanies*, vol. III, pp. 181-96), is an exception. A considerable number of the seals of representative people were appended to it. Apart from this document, and going both by fifteenth- and sixteenth-century records, it would seem highly probable that all seal appenders (or at least very nearly all) described as burgesses of Kirkwall were actually bailies; even though the designation "bailie" was only occasionally added. For instance, James Redpath, who frequently appended his seal in the sixteenth century, is never styled bailie in the charters, but we know he was from a reference in *Kirkwall in the Orkneys* (Hossack), p. 95. And the same applies to several others whose seals were in constant use; as, for example, John Pearson, John Brown, and David Scollay.

⁶ *R.E.O.*, No. XVIII.

Of this collection of five representative men, apparently *ballivi*, William Irving's seal of arms is extant, the Paplays' arms have been noticed,¹ the Magnusson or Manson arms have lately been found on a slab in St Magnus, and the Flett arms appear on the early slab discussed above. And, it may be added, the seals both of John Magnusson and Kolbein Flett certainly had shields, though unfortunately the devices on them are quite defaced.²

In view of these facts, and of all the others so far collected—i.e. the limited number of families who used arms, the connection of arms in Norway solely with the king's liegemen, the presence in Orkney of liegemen officials, and the direct evidence of arms-bearing by almost all of these whose names are recorded—the probabilities seem very strong indeed that we have here the true source of Norse arms-bearing in the islands. I may add that the lawman and the *ballivi* of Kirkwall by no means exhaust the possible royal officials in Orkney. There were, for instance, large royal estates and other interests,³ which probably implied chamberlains.

The suggestion that, in addition to authorised arms, "family badges" on shields were also in use scarcely seems to have much justification. On general grounds, the existence of a coat of arms is as much a fact as the existence of a charter, and to dismiss either as probably spurious, without definite reason, is to risk the consequences of neglecting evidence. And in the case of Orkney there are two very good reasons against such a supposition. Firstly, had such a custom existed many more coats would have been in use; the Yenstay family, for instance (referred to both in Captain Norton Traill's paper and mine), would scarcely have been without any device on their shield. And secondly, such quasi-armorial devices, though common in Norway earlier in the fourteenth century, entirely disappeared in the second half, and in the fifteenth century only the "*bomærkes*" (unheraldic marks or devices) of the bonder and the coats of the armigers are to be found.⁴ I have

¹ Both this seal and the Paplay arms were noticed in the first of my two papers in these *Proceedings*.

² See Later Note at end.

³ See *R.E.O.*, No. XI. p. 26, and also No. IX. These crown estates in Orkney are referred to in Professor Taranger's *Udsigt*, II. p. 285, note 1.

⁴ In 1342 there are fifteen extant seals attached to an up-country decree at Voss in Norway (*Norske Sigiller*, Nos. 130, 367, 368, and 415-26), the appenders being evidently representative bonder. Of these, six have shields with armorial charges. The first, which was also the first of the whole list, was very probably the seal of a genuine armiger, but the second on the list is non-heraldic, and then come the rest of these apparently heraldic seals, mixed up with the non-armorial (one of them being actually the very last). On such a document the seals of the nobility would certainly have come first, so that five out of these six seals of arms may safely be put down as not genuinely heraldic. But in the next century, out of fifty-three extant seals of representative bonder attached to a number of deeds between 1430 and 1447, every one is frankly non-armorial (*Kirkens Lovgivning og Vedtægter*, 1388-1447, Taranger).

little doubt, personally, that the arms of such families as the Haleros and the Irelands had the same origin in Norwegian authority as the others referred to previously; though the connecting link be not known.

In conclusion, I should like to take this opportunity of correcting or amending one or two statements in my first paper.¹ (The references that follow are to illustrations in that paper, unless otherwise stated.)

Since its publication I have found a seal appended by William Halero of Aikers in 1567,² which shows a shield divided per fess and the upper half per pale. In base is what no doubt was intended for a mount of three tops, in sinister chief are two stars over as many guttées, and in dexter chief appears a charge that I think with little doubt may be set down as a helmet. In view of these arms, it now seems likely that the curious charge in the first quarter of Sir Nicol Halero's shield (fig. 4 in my paper and fig. 11 in Captain Norton Traill's) is also a helmet, and in this case the charge in the third quarter is probably a three-topped mount and not a crown. The stone is very worn, and what I took to be jewels in the crown may quite well be the result of time and the tread of feet. On re-examination only two of these small depressions were visible to the eye, both very faint.

I was certainly wrong in attributing to Mr Magnus Halero the seal (appended in 1568) shown in fig. 15 of my paper and fig. 12 of Captain Norton Traill's. Since then I have found two of his seals (1560 and 1567),³ each having a different coat but neither having these arms, and without any doubt this was really the seal of his wife, Margaret Sinclair. It ought to have been her husband's, since his name came second among the three appenders of seals, and this is number two, and, moreover, he actually signed his name above it, even adding the words, "witht my hande appreis my seile"—two circumstances which misled me completely. I ought, however, to have been more wary, for the remains of two letters, TE, fit her name exactly and do not fit his, nor do the letters CLER (an instance of the disastrous consequences of neglecting evidence; hence I write with some feeling on the subject). The full legend evidently ran:—S. MA(RGRE)TE. (SIN)CLER, and what seems a V at the end is simply an ornamental stop.⁴


With regard to the legend round the seal of William Thurgilsson, lawman in 1425 (fig. 12), I think an amendment can now be made. Closer examination of the seals in *Norske Sigiller* shows not infrequent appearances of both runic and Gothic lower-case letters among the usual

¹ *Proceedings* for 1917-8.

² Charters of estate of Brugh.

³ Barrogill Castle charters and Brugh charters.

⁴ The arms may be compared with those of her uncle, Edward Sinclair of Strome, shown in fig. 14 in my first paper (*Proceedings*, 1917-8) and fig. 4 in my second paper (*Ibid.*, 1918-9).

Gothic capitals,¹ especially runic. One whole legend is in runes, besides various odd letters and a number of the "bomærkes."² In this particular legend the letter K, which I had supposed to be broken, has actually the runic form , somewhat bent by pressure from above (of which there are clear marks); while the next letter, L, may be read as an undamaged Gothic l. The casts make this clearer than the illustration, and in all probability these are the correct readings.

Finally, the coat with crossed swords (fig. 16), which I had thought very likely to be Rendall, must now be classed among the unknown armorials, for I have since found the actual Rendall arms, as used by the Breck branch of the family, on a seal (fig. 1) affixed to a letter from William Rendall of Breck (undated, but certainly late seventeenth century, though the matrix seems to have been considerably older).³ This seal shows a shield parted per fess (see illustration). The upper half, partly broken away along the line ab, is apparently vair, and the lower is charged with what I think is undoubtedly a seal. The fin and downward curved

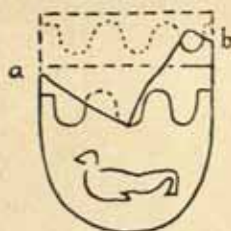



Fig. 1. Rendall Arms.

tail are exactly those of a walrus shown in *Norske Sigiller*, No. 44. The whole seal is very small and the impression not very distinct, but in the enlargement I have drawn the charge exactly as it appears under a strong lens. It is significant that the Rendalls were an old lawman family (Henry Rendall held that office 1438-46), and their singular arms have every appearance of being an ancient coat.

I think it is worth recording that in both the Icelandic grants previously referred to the charge was a white bear; which seems distinctly to indicate that an arctic animal was deliberately selected.⁴ On this analogy, the seal in the Rendall arms and the seal's head shown in fig. 5b (the shield being also parted per fess, with the lower half

¹ The terminology used here is that employed by Mr Rae Macdonald in his *Scottish Armorial Seals*.

² No. 745 is in runes, and the S-shaped S used there is found in several other legends, besides various examples of the runic form . In the legend of No. 255 is a K borrowed from one of the elaborated runes used in early prime staves (see particularly p. 363, *Proceedings* for 1891-2), and another example is probably to be seen in No. 140, where the word Thorleki is written Thorlevi; the V apparently being really a runic K. Of non-heraldic seals with the owners' initials, or single initial, or sometimes the first two letters of his name, in runes, Nos. 83, 337, and 692 are examples out of many. Gothic lower-case letters are most conspicuous in No. 852, which is chiefly composed of them. Elsewhere L and K are the letters most frequently seen in Gothic characters. In fact these two letters, and S, seem the likeliest to be found in some irregular form.

³ Letter in the author's possession.

⁴ As a matter of fact, the first white bears ever seen in Norway were brought from Iceland (*Landnámabók*, III. v. 9. See also III. xxii. 4 for further evidence of their occasional presence in Iceland).

barry wavy)¹ decidedly suggest a similar Orkney allusion; and if so, one would naturally look for the same source, *i.e.* a royal grant of arms to subjects in the islands; probably, too, at a date not very widely different from the dates of the Icelandic grants (1450 and 1457).

Possibly this may also give a clue to the puzzling Halero arms. The three-topped mount in base is also found in the arms on the seal of Frederick Newfar, notary public, appended at Kirkwall 11th March 1507-8,² and it is difficult to believe that such a rare and remarkable charge would occur in two different coats out of the comparatively few in use in these not at all mountainous islands. Can it originally have been a holm or island with three rounded hills (introduced simply to give it definite form as a charge)? Such a coat might well have been granted to two island families, on the same principle as the Icelandic and Orkney arms just mentioned, and then might readily have come in the course of time to be read as a mount of three tops. Its appearance in one case with a pointed base I personally should attribute simply to its having been copied from a seal in which the charge was in the very base of the shield (the usual position of a mount in Continental arms; see Woodward and Burnett), and the stone-cutter having reproduced the whole outline, point of the shield and all.³

With regard to the lion in the Halero arms, I think Captain Norton Traill is very probably on the right track in suggesting that it signified a claim to descent from the royal house of Norway. Several Norwegian families descended in the female line from King Hakon Hakonson (of Largs fame) introduced the royal lion into their shields.⁴

LATER NOTE.

The phrase "*hederligha manna oc ærligha*" (distinguished and honourable men) applied to the four who appended seals to the Complaint of 1425—W. Thurgilsson, lawman, K. Flett, J. Magnusson, and W. Irving—was only used of the nobility (or the clergy). This makes it certain that these were all armigers.

¹ My suggestion of a canting allusion in these arms must be corrected.

² *R.E.O.*, p. 388. The upper part of the shield is obliterated, but no doubt would contain some charge distinguishing it from Halero. Frederick at that period was a purely foreign Christian name, and Newfar would seem to be probably the Scotticised form of a Scandinavian surname beginning with Ny (=new). No other member of the family is found on record in Orkney, so that it is likely they came first in an official capacity and finally returned for good.

³ Mr Magnus Halero's 1567 seal shows this charge as three separate hills, each with flames on the top, apparently "wardhills" with their beacons, a characteristic feature of the Orkneys in old days.

⁴ *Norges Gamle Vaaben, Farver og Flag* (G. Storm), p. 22. The baronial families of Tolga and Bjarkey, who are mentioned, both used the lion instead of their original arms. *Norske Sigiller*, No. 629, however, shows the seal of Sigurd Hafthorson (member of another royally descended family), which is divided per fess with a demi-lion in chief and half a rose (the family arms) in base.

IV.

BRONZE AGE GOLD ORNAMENTS FOUND IN ARRAN AND WIGTOWN-SHIRE, WITH SUGGESTIONS AS TO THEIR METHOD OF USE.

BY LUDOVIC M'L. MANN, F.S.A. SCOT.

About 25th February 1921, Mr Finlay Kerr, while searching for building-stones for a new house at his mother's farm of Whitefarland, Kilmory Parish, on the north-west coast of Arran, dug up some slabs

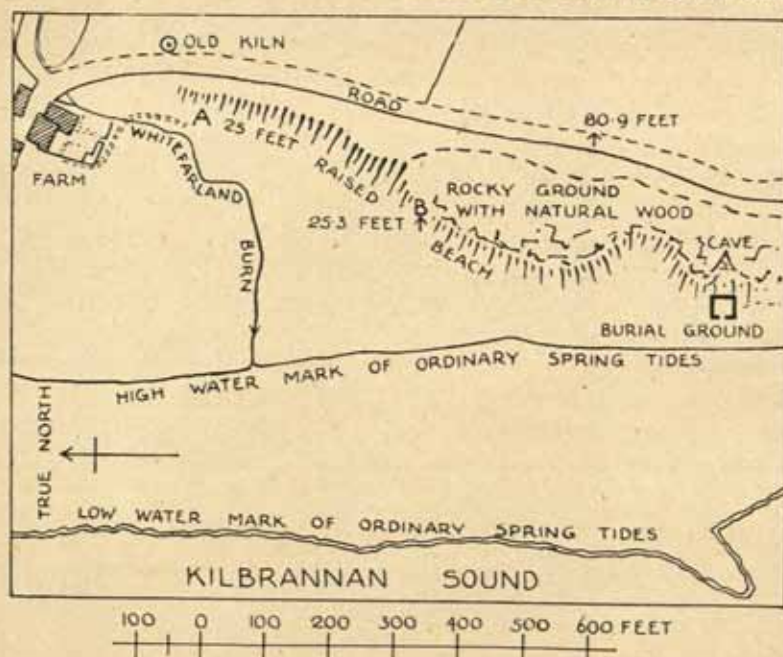


Fig. 1. Map showing Sites of Finds.

of the native schistose rock which were lying roughly and deeply set together in the flat stretch of the 25-foot raised beach.

Some 2 feet under the surface he picked up a gold bracelet-like object in perfect condition, weighing 3.030 oz. It was kept in the farmhouse for some weeks, and then sent to Mr Angus Stewart, Jeweller, Buchanan Street, Glasgow, who showed it to several persons.

Mr Stewart, Mr T. C. F. Brochie, Mr Charles E. Whitelaw, and myself, in the hope of being able to complete a record of the circumstances and to secure associated objects, went to Whitefarland. The place of the find (A in fig. 1) is 65 yards south of the steading

and near the foot of the old sea-cliff, at that point a small declivity. For years the plough has been worked round the spot without disturbing it much because of the outcropping of the slabs. We dug over the site and riddled the soil, encountering many rock fragments and water-rolled stones embedded in the soil washed down on the top of the old raised-beach gravel. No definitely built structure was noticed, and no absolutely clear evidence could be obtained that the place had either been a tomb or a dwelling.

On the first day of the investigations I turned up within a few inches of the place where the first object had been discovered a very fine, hollow, penannular ring of gold of triangular section, also in perfect condition, weighing 255 oz.

An artificially cup-marked rock was noted 117 yards 1 foot south of the place of the discovery and 6 feet north-east of a bench-mark, the altitude of which is indicated in the Ordnance Survey chart as 25.3 feet (B in fig. 1).

There were also found about two dozen fragments of pottery characteristic of a late phase of the Bronze Period, and belonging to two vessels each of a type used for domestic as well as sepulchral purposes. Such pots have been occasionally found associated with or containing objects of gold.

The shards discovered belong to hand-made vessels, but only a few details can be made out because of the small number and size of the fragments. The larger vessel is biscuit-coloured on the outer and black on the inner surface. One fragment shows that its wall at places has been $\frac{1}{2}$ inch thick. It is of coarse texture, and the paste has been mixed with small pounded pieces of stone evidently to prevent the pot cracking during the process of firing. The outer surface of the pot has been coated with a thin layer of fine clay in a finishing process before firing. On a fragment being placed in hot water this skin peeled off cleanly. The smaller vessel has been of dark colour, and may have been decorated by slight horizontal flutings. It has had a plain rounded rim.

The smaller of the Arran rings (fig. 2) belongs to a well-recognised class of small, hollow, penannular ornaments of triangular section, made of three thin plates of gold fixed together without soldering and merely by overlapping the edges and closing them tight by hammering. The plates are skilfully joined by turning

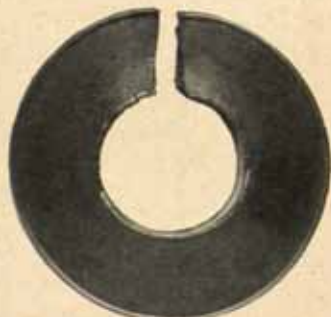


Fig. 2. Penannular Gold Ornament from Arran. ($\frac{1}{2}$.)

the edge of one plate over that of the other, the edges at the inner circumference being held apart by another plate (in the Arran specimen $\frac{1}{6}$ inch wide) with V-shaped ends, which thus wall-in the hollow of the ring. The relic is $1\frac{1}{5}$ inch in diameter externally and $\frac{7}{8}$ inch internally.

There are eleven of these objects in the Irish National Museum—not one with a detailed history of its discovery or associated relics. Five are complete, but only three are in perfect condition. The weights of the five vary from $\cdot 254$ oz. to $\cdot 783$ oz. Lord Inchiquin has two Irish specimens weighing $\cdot 315$ oz. and $\cdot 309$ oz. The average of the seven known complete Irish specimens is $\cdot 446$ oz.

Though evidence in support is not forthcoming, they have been usually considered to be ear-rings. Attachment to the ear would be difficult, and no specimen shows how such fixing could have been made. That they were hair ornaments is more probable. In early historic times in Ireland gold objects were used in the hair, according to *Irische Texte* (iii. p. 550), but their nature is obscure. The historically recorded examples may have been of much later type, like the objects of gold still worn in the hair by the Dutch peasantry.

These rare, little, penannular, prehistoric objects under review were probably coiffure bands. As well as being concentrically fluted, they are sometimes decorated with a band of incised diagonal lines or rows of incised dots along either side of the break in the ring. The Arran specimen is plain. Small penannular objects somewhat similar, usually of red porphyry, have been found as hair ornaments on Egyptian mummies, locks of hair apparently having been pressed through the break in the side and tightly filling the ring.

Such rings of British and Irish type occur only in gold and have not been found on the Continent. Being of particularly fine workmanship, they demonstrate better than almost any other kind of gold relic the high degree of skill attained by the British and Irish goldsmiths of the Bronze Age. The Arran specimen is the third found in the west of Scotland and the eighth in the whole of Scotland, as against fifteen recorded from Ireland, three from the north of England, and one from the north of Wales. Their home, therefore, was probably Scotland or Ireland.



Fig. 3. Penannular Gold Ornament from Glenluce. (f.)

A perfect and beautiful example found without definitely associated relics in Wigtownshire, near the boundary between the parishes of Luce and Stoneykirk and about $\frac{1}{4}$ mile from the high-water mark (fig. 3), is perhaps the smallest known, weighing only $\cdot 070$ oz. Its external diameter is $\cdot 75$ inch, its thickness $\cdot 2$ inch, and the diameter of orifice $\cdot 4$ inch. It is ornamented on either

exterior surface with eight concentric flutings worked by hand on the gold plate by a graving tool.

The remaining Scottish examples, which are quite plain, are all preserved in the National Museum. One of .550 oz. was found in 1856 in a moss in the west of Scotland. The precise locality was not disclosed owing to a mistaken fear of the ancient law of treasure trove. It was part of a hoard of which there survive a pair of plain, solid, penannular gold armlets, slightly oval, and open at one side, the ends thickened and flattened into button-like extremities. The three objects from this

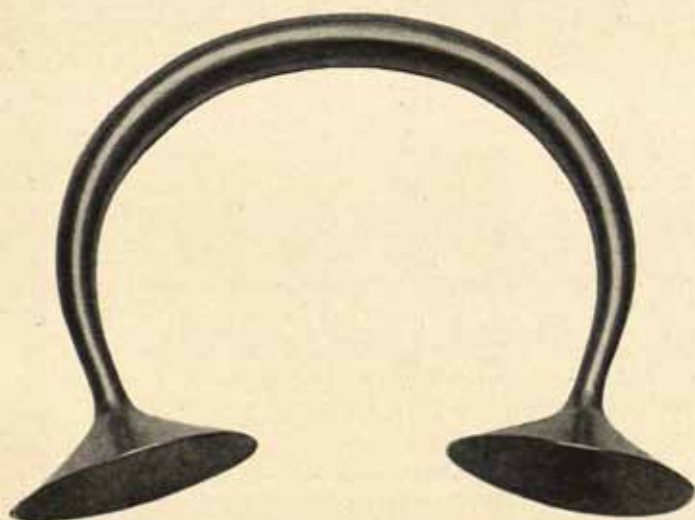


Fig. 4. Penannular Gold Ornament with cup-shaped ends from Arran. (†.)

hoard were bought by a jeweller in Dumbarton, who sold them to Mr Peter Denny, from whom they passed to the Museum. Another, which, like all the others, is triangular in section, was discovered, somewhat crushed, in 1811 at the digging of a gravel pit at Gogar House, Corstorphine. In the same pit were found a bronze sword with scabbard tip of the same period, and a bronze brooch undoubtedly of much later times. There is no evidence that the last-mentioned relic was found directly associated with the others. Four were found at Balmashanner, Forfarshire, with three other small penannular gold ornaments possessing bronze cores, a socketed axe, twelve penannular armlets, ten rings, and part of a bowl, all of bronze, and a necklace of thirty-one beads of amber and four of jet of round and flattened spheroidal form.

The larger object from Arran (fig. 4) has been made by bending into oval shape a solid gold rod, somewhat thickened in the middle of its

length, and by bringing the ends nearly together. To either end has been most skilfully melted on or sweated a calyx or trumpet-shaped piece. Though not on the Arran specimen, engraved lines sometimes occur inside and outside the calyx, and more rarely the neck joining the calyx and bar are likewise decorated, in some cases only on the outer side of the neck. The centre of the bar invariably remains plain, as if when in use that part alone was not seen. This type of object has seldom an over-all spread greater than 3·5 inches, which is the measurement of the Arran specimen. Its bar has a maximum thickness of ·3 inch. The diameter of one of the expanded terminals is 1·35 inches and that of the other 1·3 inches. The cross external diameter of the ring is 2·93 inches, and the distance between the extreme edges of the cup-shaped terminals 3·5 inches.

This relic, a bar of gold bent into an oval with open ends expanded like trumpets, belongs to a class of ornament often erroneously styled "*fibulæ*," which has repeatedly turned up in Britain and Ireland. The "*fibula*" does not seem capable of being fitted to a wrist, arm, or ankle even of small size. If so worn it would be extremely inconvenient. It is generally thought that the object was some kind of brooch or dress-fastener, but no pin has been found in association. It is clear that the ends, so very conspicuous, were meant to be seen when the object was in use, because only that part and its neighbourhood are decorated.

The suggestions as to these objects having been ring-money—some inquirers conjecture the rings were used as mediums of exchange—bracelets, dress-fasteners, or brooches have to be ruled out after the known specimens of the class are compared and critically studied.

The largest specimen of such "*fibulæ*" was found in 1819 in County Rosecommon, at a depth of 5 feet in gravel, from which fifteen layers of turf had been cut. It has the extraordinary over-all spread of 10·75 inches. The hollow conical ends each measure 4·75 inches across, separated by a space of 1·375 inches. Its interior spread is normal.

An examination of the numerous specimens discloses that no matter what be the size of the expanded terminals or the thickness of the connecting loop, the oval enclosed space is practically constant, averaging a little less than 2 by 2·5 inches—a capacity clearly calculated to hold the whole hair of the head, as worn naturally in youth, gathered together at the nape of the neck. The object if thus used would have its dilated terminals placed facing upwards and outwards. As a coiffure band it was useful as well as ornamental. The plaited hair would perhaps be dressed in a catagon knot round the bar. Some modern but very rarely used combs with wings or expanded ends are so adjusted.

Three Bronze Age Irish specimens show ornamental engraved work on the parts of the bar nearest to the terminals and restricted to the outer side of the bar—a feature which indicates that when the object was in use the whole bar was not hidden at that point (as it would if it had been employed for gripping the edges of a garment of cloth or skin), but merely its central section and inner face, as would happen were locks of hair enclosed by the loop.

They have been found in Ireland on two occasions associated with sets of fairly large ovoid and discoid amber beads of graded sizes; also with bronze socketed and looped axe-heads, a bronze or copper penannular ring, and with plain complete bronze rings suitable for armlets. Two specimens were found in June 1919, 11 feet under the surface of a bog in County Cavan, with two penannular bracelets of gold with button-like extremities, and, most important of all, with a circular disc of thin gold lavishly decorated.

From other discoveries it is known that such a disc has almost certainly been the covering of a bronze disc which was employed, as a symbol of the Sun or Moon, mounted vertically upon a miniature horse and carriage of bronze.

The associated relics found in Scotland and England are similar, and confirm the testimony afforded by the Irish records. The weights of "fibulæ" with hollow cup-ends, or, as I think they should now be more correctly called, coiffure rings of the larger type, range from about 2·206 ozs. to 16·858 ozs. The two types of gold objects just found in Arran belong to the later stage of the Bronze Age, about 900 years B.C., with a possible range of 200 years on either side of that date.

The gold objects found in Arran have, so far as known, been treasures hidden for subsequent recovery. They have not been connected with graves, except a fragment of a fluted fillet found in the large cairn at Blackwaterfoot, and perhaps a penannular ring, now lost, said doubtfully to have been found in a cist at South Kascadale, Largie Beag, Whiting Bay.

What seems to have been an ornament very like the larger recently discovered Arran specimen is aptly described as a "piece of gold in the form of a handle of a drawer," and was found a few years before 1845 in Arran when a fence round a garden was being made. It was sold to a Glasgow jeweller, who melted it. This was an interesting discovery, as the record states that some non-golden matter was attached to the inside of the trumpet-shaped extremities. As this has been noticed in other cases in Scotland—in Islay and Ayrshire—it is possible that sometimes the hollow cones contained a substance, perhaps amber or vitreous material, introduced to enhance the decorative effect. At Ormidale, Brodick,

were found about 1864 four penannular armlet-like objects with slightly expanded extremities, weighing 1·008 oz., ·820 oz., ·739 oz., and ·437 oz. A bronze pin with a cup-shaped head found at Point of Sleat, Skye, with a sword, socketed spear-heads, and a curved socketed blade, all of bronze, may also have had its cavity furnished with some non-metallic, ornamental filling. Shortly before February 1865, in Arran were found together six rings of gold, each formed of several wires. Two of the rings are made of three wires plaited together. The other larger rings, apparently of eight wires, are interlaced so that two of them form a twisted ridge projecting round the circumference of the rings. One of these rings is imperfect. They weigh respectively ·270 oz., ·297 oz., ·412 oz., ·437 oz., ·445 oz., and ·487 oz. With them was found a small plain penannular object 1·1 inch diameter, tapering towards its opening extremity and weighing ·216 oz. With this hoard were two portions of apparently larger rings or armlets weighing ·360 oz. and ·383 oz.

While greatly differing in character, the two recently found Arran objects are of broken or unclosed ring shape. Apart from the brilliance of their material they attract attention because of their unfamiliar appearance, resembling no ornament or utensil of historical or modern times. They give rise to speculations as to their functions, which are not at all apparent. It is clear that they belong to a lost and long forgotten civilisation of some importance and refinement. They are types, however, well known to students of prehistoric archæology.

SUPPLEMENTARY NOTE TO SCOTTISH BRONZE AGE HOARDS,

pp. 123-66. By J. GRAHAM CALLANDER.

Since going to press, a note about the two flat bronze axes from Nairnshire (No. 3 in table on p. 127) appeared in the *Nairnshire Telegraph* of 5th June 1923, amplifying the information regarding their discovery which I was able to give in recording them in the *Proceedings*, vol. lvi. p. 358. The axes were found, one lying on the top of the other, about 14 inches below the surface, almost due south of and near a square stone coffin without a lid, within the precincts of the old Kirk of Barevan, near Cawdor, Nairnshire. The stone cist still survives.

With regard to the hoard of broken bronze swords and other objects found in Duddingston Loch, on p. 364 of the same volume of *Proceedings*, I stated that the three sword fragments presented to Sir Walter Scott could not be found at Abbotsford and evidently had been lost. A further search by Mr James Curle has resulted in the discovery of one of these fragments—the point portion of a sword.

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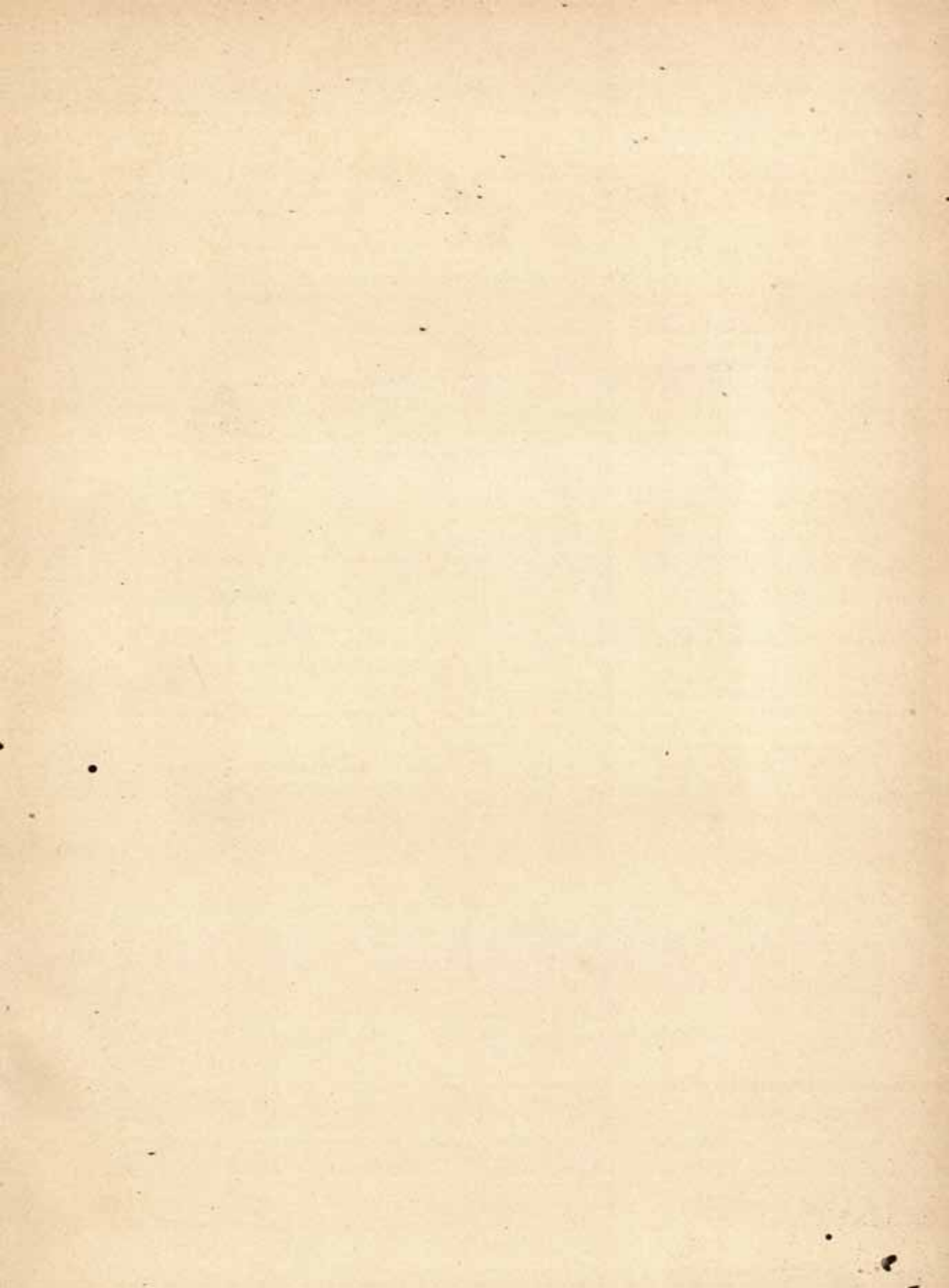
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